

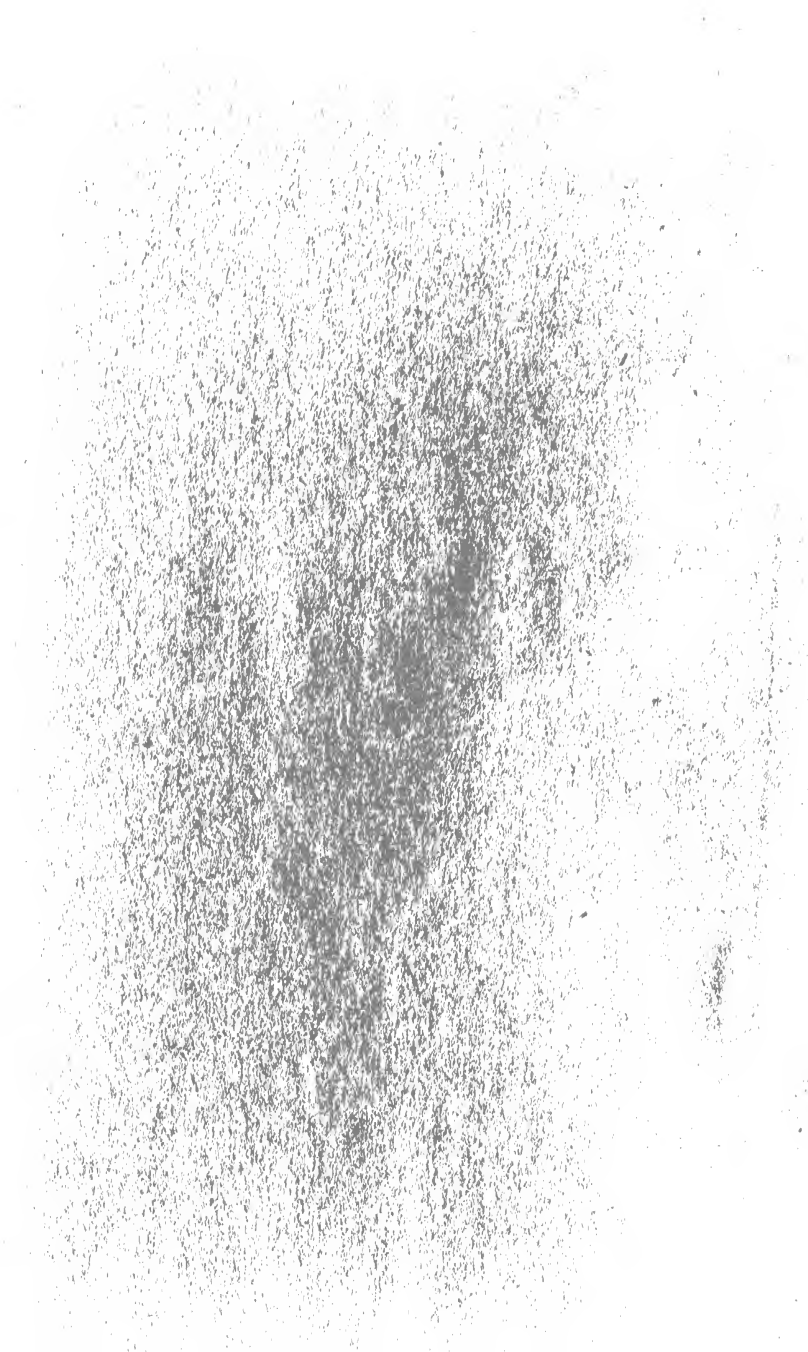


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BETTER SCHOOLS



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TORONTO

BETTER SCHOOLS

BY

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LATE SUPERINTENDENT OF SCHOOLS IN TRENTON, NEW JERSEY
AND IN CHELSEA, MASSACHUSETTS

EDITED BY

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PREFACE

THOSE who had the privilege of knowing Dr. Gregory intimately during the last few years of his life were hopeful that he would do an essential work for the schools of the world. He had the spirit of a great teacher, and he was a true man. He understood the fundamental principles of Froebel's philosophy much better than most of the progressive educational men, better even than many of the Kindergarten leaders.

He clearly grasped two of the vital principles that are transforming educational thought and revolutionizing educational practice: first, that the child, and not the knowledge to be communicated to him, should be the determining basis of pedagogical systems and of school methods; second, that the child develops power — which is infinitely more important than knowledge — by his own self-activity, and by self-activity only.

Dr. Gregory made these two principles the basis of educational practice, and the unfailing test of all school work. His lectures and his writings revealed a rapidly developing insight that fully justified the hope that he would become a revealer of truth and a transformer of conditions in the schools in harmony with the most advanced educational ideals.

He was writing a series of educational articles with the

view of having them published in book form, when his life work came suddenly to an end. Some of these articles were published in a local paper in Chelsea, Massachusetts, where he was Superintendent of Schools at the time of his death. Others were published in educational magazines.

It was his intention to publish these articles in book form, and many of those who had been admitted to his circle of friends, or who had heard him expound and apply his principles of education at Summer Schools or at institute meetings, expressed the hope that they might be collected and published. The privilege of editing them was graciously given to me. To do the work assigned me has been joyous and uplifting. I hope the result — his book — may be a worthy memorial to him, and that it may guide many of the teachers of his own and other lands to clearer insight, broader thought, and higher power as teachers.

Teachers will find the book stimulating to original investigation. It emphasizes the need of a closer unity between the school work of the child and the work and life of the world in which he lives. It advocates the wisdom of adapting the course of study and the operative processes of the school to the nature of the child and to the progressive development of his powers. It makes the child and his activities and interests the center of the school universe. It accounts for the child's apathy and carelessness in school, and reveals the methods by which he may be kept as vitally interested and energeti-

cally productive in school as he is in his free life outside of school. It shows how the bright, alert, interested, achieving child of five may be saved from the too common torpor and indifference and ineffectiveness induced by the schools at fifteen. It changes the aim of education from mere knowledge to power, skill, and character; from books to life.

Dr. Gregory did not use new thought merely to reveal the weakness of old ideals and practices. He was constructive, not merely destructive. He used new truth to reform conditions and in his reconstruction he preserved all that was useful or beautiful in the revelations of the past. His theories are not visionary; his ideals are clearly expounded and easily understood. They are applicable to schools of all grades. Superintendents and teachers will find the book interesting, instructive, and inspiring.

JAMES L. HUGHES.

TORONTO, August, 1911.

FEBRUARY 20, 1912.

MRS. HANNAH B. GREGORY,
5 Fitz Terrace,
Chelsea, Massachusetts.

MY DEAR MRS. GREGORY :

I am greatly pleased that the letters contributed by Doctor Gregory to the *Chelsea Gazette*, shortly before his death, are to be published in book form. These articles I read with the greatest interest and pleasure from week to week, as they appeared. You will remember I wrote to Doctor Gregory at that time, urging him to recast them and have them made into a book.

Doctor Gregory had an unusual insight into the principles of education, and a still more unusual ability to state them in clear English, easily intelligible to the great mass of teachers. It was for this reason, I think, that year after year at the Summer School of the South, held at Knoxville, Tennessee, under my supervision, a large number of the thoughtful teachers filled his classes to hear his lectures on the principles of Froebel as applied to education in schools above the kindergarten. His constant study of education not only from the books but concretely and at first hand, his clearness of statement, and his sweet spirit made him an ideal teacher of teachers.

These letters have the added value that must ever come to any writings that have sprung out of the life and heart of a man when working for the advancement of a great cause. I am glad they are to be given this more permanent form by a man so capable of interpreting Doctor Gregory as is Doctor Hughes. The book cannot fail to accomplish much good for the cause of truer ideals and better practice in the schoolroom.

Yours sincerely,

P. P. CLAXTON.

CONTENTS

CHAPTER	PAGE
I. SELF-ACTIVITY.	I
II. THE KINDERGARTEN	11
III. CONTINUITY OF KINDERGARTEN AND ELEMENTARY SCHOOL	27
IV. GUMPTION	39
V. MANUAL TRAINING	54
VI. INDUSTRIAL TRAINING	64
VII. NATURE STUDY	89
VIII. PLAY	98
IX. POPULAR CRITICISMS OF SCHOOLS	111
X. MUSIC, LITERATURE, AND DRAWING AS ELEMENTS OF CHARACTER	130
XI. ARITHMETIC	136
XII. GEOGRAPHY	142
XIII. READING	161
XIV. SPELLING	169
XV. LANGUAGE	197
XVI. HISTORY	245
XVII. BASIC PRINCIPLES	252
APPENDIX	261

BETTER SCHOOLS

CHAPTER I

SELF-ACTIVITY

THE weakest element in modern educational thought is the belief, conscious or unconscious, that a child's character may be constructed by the teacher, and that it may be constructed by the judicious selection and teaching of certain amounts of different kinds of knowledge. Nearly as weak is the idea that the great aim of the school should be to communicate knowledge to the pupils as a preparation for their life work.

The child's success in life will depend mainly on two things: his power and his skill. The development of his power and his skill should, therefore, be the supreme aim of the school, not the storing of his mind — or, as is too often the case, his memory merely. The overvaluation of knowledge, and the inability to recognize the selfhood of the child, are responsible for the failures in modern education. The New Education believes that the child — not knowledge — is power, and that the development of this power by the child's self-activity is the supreme work of the school. This thought lies at the basis of every great modern tendency in education.

You cannot "grow" a child's body. You cannot "grow" a child's mind. But modern educational practice says you can do the latter. Therefore modern educational practice is absurd. This is our fundamental absurdity, the absurdity on which we build our other absurdities. It is our pet absurdity.

The postulate, so far as it applies to the body, does not admit of argument. You can surround a child with conditions favorable to growth, but he himself must do the growing. He must do the eating, the exercising, the sleeping, the bathing. Nobody else can eat, exercise, sleep, or bathe for him. But when one turns to the growth of the mind, a spurious pedagogy asserts itself. No one who thoughtfully considers the data offered by thousands of schoolrooms can come to any other conclusion than that our practice, at least, is fundamentally wrong. The pupil's attitude toward work is seen in the aimlessness and feebleness of his efforts, in the fragmentary character of his answers, in the inarticulate language in which they are expressed, in the slovenliness of his written work, in the perfection to which he has reduced the art of dawdling, in his slouching posture in writing, and often in the extraordinary contortions by which he arrives at such a posture.

The teacher, on his side, favors this attitude and ministers to the condition of things which lies back of the attitude, by coming to his assistance in every possible way, explaining before the pupil himself has really tried to comprehend, filling out his imperfect sentences, point-

ing out his errors, most of which the child knows very well are errors, and at every point anticipating healthy effort on his part.

Let the following test be applied by any teacher. Hand a set of compositions back to a class without indicating the errors, and demand that the errors shall be not only corrected but discovered, and that the compositions shall be rewritten. Continue to hand back the same compositions indefinitely until all the errors are discovered by the writers, and a composition perfect in view of the state of the child's progress is evolved. Persevere in this treatment, and soon the child becomes practically independent. Whereas the pupils at the beginning could not produce a perfect composition without many efforts, at the end of the year they are able to do so with one or two efforts. The same course of treatment applied to arithmetic, Latin, German, or anything else, will reveal the same result. It becomes apparent, when such a course of treatment is persisted in, that for the first time in their school lives the pupils are self-active. The teacher learns how low his standards have been, and for the first time in his life grasps the possibilities of self-activity in education. Indeed the modesty of the teacher's usual demands on the child would be amusing if it were not so serious.

No one can do for another what the latter can do for himself, without interfering to that extent with his growth. Growth is from within and is brought about, consciously or unconsciously, by the acts of the party who

desires to grow. Whenever a teacher does for a child what the child could have done for himself, he deprives him of the right to grow ; if he persists in such treatment, he stunts the child's growth ; if he could do absolutely everything for the child, the child would not grow at all.

This treatment of the child is sometimes called "the new education." It is a libel on that honored phrase. The new education emancipates the individuality of the child. Its very basis is self-activity, and it aims to place the child in such an environment as to evoke that activity. In the new education there is a time to explain and a time to cease from explanation, a time to give help and a time to withhold it.

There is but one remedy. The child must be forced back on himself. He must have just as much help as is necessary to place him in a position to help himself, and no more. This amount varies with the child, but its limit in any case is a sacred line, over which you pass at his peril. The teacher must more and more withdraw himself. He must stop meddling. There is no educational discipline but self-discipline, and, in its final resolution, there is no education but self-education.

Self-activity must not be confounded with the activity of the pupil in response to the suggestions or directions of the teacher. The teacher's duty is to reveal new laws and new principles that the pupil cannot discover for himself, but the application of the principles should be made by the pupils themselves. The simplest and most perfect test of the value of a teacher's work is the amount

of self-activity developed in the pupils. The great aim of every teacher should be to discover new methods of arousing vital interest in his pupils as the true basis for increased self-activity on their part.

Self-activity is not an empty word with a big sound. It lies at the basis of all teaching. The lack of it explains most of our failures. To really grasp the idea will revolutionize any teacher.

The product of the public school system taken as a whole is not inspiring; in many cases it is disheartening.

This does not apply to all the schools in our land, but it applies to most of them. The picture is not accurate in its entirety in all schools, but the weakness is in most of them. It is generally, at least, a clearly defined tendency, and often it is a clearly defined fact.

And the condition grows worse from the time the child enters school. When we receive him he is a bright, wide-awake, self-active little child. When we get through with him at the close of the high school he is neither bright, wide-awake, nor self-active. Every teacher knows that these statements are true. The high school teacher, for example, is emphatic in his criticisms of the grammar school graduates whom he receives. He is right, but he does not do any better. The deterioration does not stop at the high school. And the worst critic of all is the business man who receives our output.

This is not education. Indeed, such a state of things makes real education impossible. The importance of

education lies not in the arithmetic, geography, etc., but in the reactions arising from these studies; not in how much arithmetic a boy learns, but in what sort of an arithmetician he becomes. Which, for example, ought we to prefer in arithmetic: rapidity and ease in straight-away percentage, or a feeble and perfunctory power in four cases of percentage? What should be the outcome in arithmetic? Simple arithmetical power, and this can be taught by the use of a very narrow field of topics, so that the pupil will be able to take up the omitted topics whenever it is necessary. But no such definite outcome as arithmetical power is before the teacher whose aim is merely the acquisition of facts. Picture a student with arithmetical power and a love for arithmetic who has never studied partial payments, but is called upon to use partial payments after he has left school. He will learn the subject in five minutes.

But children do not leave school with that power. They acquire merely a mechanical, and generally a dawdling ability to do a few specific things.

So much for the diagnosis. Now for the cause of the disease and its treatment. The analysis is simple and has been hinted at already. The worst of the trouble lies in the tendency on the part of the teacher to do for the child what he can do for himself.

Every time a child acts for himself he grows stronger. Whenever some one else does his work he grows weaker. Let the process of outside assistance go on year after year and the present results are explained. To develop

his arm, as a child he must use his arm. The law applies equally to his brain.

But there is a deeper question. Why do not teachers demand and get self-activity?

Teachers may be divided into two classes: those who can get this self-activity and those who cannot. Whatever other results a teacher may obtain, if she does not obtain this result, her product will fall far short of the true ideal. What is the consideration on which the whole question is determined? The answer is, the outcome, — the outcome which the teacher proposes for her own attainment. There are two possible outcomes between which the teacher must choose. The outcome that attracts many teachers is the acquisition of facts and a certain mechanical efficiency that can be measured by examination.

When this attainment is placed above power, the end of education is misconceived. Attainment is essential, but the world needs power, and the complaint of the world is that it does not get it. There is no loss in attainment when power is the outcome. Power makes attainment possible, and it is the only way in which it is rationally possible.

Let grammar illustrate the distinction. If *does* and *do* produce a treadmill boy, the reaction is malign. A love of written expression, which includes a love of grammar, should be the outcome, not mere accuracy in answering certain questions.

This, again, is the reason for failure in many high school subjects, *e.g.* literature. The question is not whether

the pupils understand a certain classic which has been discussed, but whether they long to read other classics for themselves. Professor Tyler of Amherst says that the teaching of literature in most high schools is like vaccination. In vaccination you give a person a mild attack of the disease and that insures that he will never have another.

From this point of view, again, the important thing is not the number of subjects taught in arithmetic, but the reaction caused by those that are taught.

Again, think of geography in this connection. The teacher in whatever grade who has not recently done some teaching of Bosnia, Bulgaria, or Turkey, or who has not followed the fleet, has misconceived the purpose of geography.¹ This is true even if the subject in the course of study in the grade is the United States. Why? Because such teaching makes geography live. It is more important that geography should live than that the pupil should be able to bound states or to tell their capitals. Therefore, geography must be cut, but even if it is cut, it is entirely possible to teach the balance of it mechanically.

The lack of self-activity, I have said, expresses itself in the attitudes and positions of children, in their tone of voice, in dawdling and careless written work, in unwillingness for research. According to the psychological law, external phenomena react on internal phenomena. In accordance with this law we should expect our school

¹ Written during a war in Turkey.

work to show this reaction. Of course it shows it. An apathetic class in reading is a proof that the reading is badly taught and is having no educative effect, and this is true in the high school as well as in the primary school. When children wish to come back to school for geography and arithmetic, as they wish to come back for manual training and music, the teacher has been truly successful.

These considerations, therefore, are not merely facts. They are indications of wrong conceptions, and of failure. Froebel says the child must evolve his own personality; he must find himself. But in many cases the personality is submerged. There is a vague theory that the teachings of the teacher will all blossom by and by, even if the child does not show interest in them now. The fact is that the teachings do not blossom.

There are, of course, reasons for this malign state of things we have been describing, for which we are not responsible. So far as the results in our schools are controlled by inheritance or by the fact that the pupils have been passed up from one class to another with a tendency to inactivity accumulating, the teacher is not to blame. But while these causes account in part for failure, they do not account at all for our lack of effort.

But there are reasons for which we are responsible. For example, there is a state of mind, a false conception of the path of the least resistance. It is easier to do treadmill work because we know it than to attempt a digression. Old plans, like old shoes, are more com-

fortable. The teacher sees the phenomenon of apathy, but becomes used to it and says it cannot be modified.

Then there is a stolid conservatism in regard to old things. This is maddening. And finally there is the failure to conceive the true end of education.

CHAPTER II

THE KINDERGARTEN

FOR one who is imbued with the so-called practical views of education only, it is not easy to make an argument in favor of the kindergarten. "The kindergarten is a pretty sight, the children are evidently happy and that, of course, is a good thing, but — what are they learning? Only to play in a variety of expensive ways, — a rather costly frill."

But, on the other hand, what about these same children in the ordinary primary classroom? Children under the age of six, for the most part, get very little in school. They dawdle, fuss with busy work, take instruction with the greatest difficulty, and lose it with the greatest facility. If they entered at six, they would be just as far along at seven as they are when they enter at five, and they would be more original, more independent, and stronger physically. This is not economy either.

On this supposition the presence of these children in school means a waste of energy and money. It would be economy to let them play out of doors, begin school at six, save money, and increase their power. So much is clear.

But the case is not all in yet. Children on the average are not fit for regular primary work before they are

six, but does it follow from that that they cannot learn anything? Every parent knows that they learn a great deal and learn it very fast. For instance, they learn the English language. Not an insignificant achievement, that. A child at the age of six speaks English very much better than most college graduates speak French, and he learns his new language in five years, but he learns it in his own way and not in the way the schools teach it. This is not complimentary to the schools, more's the pity.

The child under the age of six has, in fact, certain powers which are fully alive and seek exercise. For the most part they are not guided, at any rate they receive no training. If such an extraordinary accomplishment as the learning of a language takes place without training and almost without guidance, what might not be accomplished with guidance? On this question the kindergarten is based. The kindergarten takes the child as he is, with all his wonderful powers. It does not substitute other powers, it does not seek to train what the child has not, it accepts the child just as he is made and does not pretend to greater wisdom than the Almighty. The little one has not any arithmetic or reading or grammar to give; the Lord has left that out for the present. The kindergarten leaves them out, too. This general proposition sounds sensible. If the kindergarten can obtain a development along other lines corresponding in extent to the language development, the trial is surely worth making.

This is the aim of the kindergarten. To determine whether it is practical we must answer two questions: What is this training? What is its effect on the child?

These are the acquisitions claimed for the kindergarten-trained child. I condense from the statements of many primary (not kindergarten) teachers:—

First, he is awakened. Second, he grasps much more readily than other children the idea presented, whether it be a direction to be followed, a story to be told, or a new word to be learned. Third, the kindergarten child uses his senses intelligently. He sees, he hears, and he is able to tell about it. He compares what he observes, and thus forms his own ideas in regard to everything with which he comes in contact. Hence the teacher has a little thinker to deal with, a mind ready to begin work for itself. Through his habits of observation the kindergarten child has gained such a fund of information concerning the world around him that the primary teacher has just so many more avenues through which to reach his mind. Fourth, his powers of attention, alertness, and self-reliance are better developed. Fifth, he gains the power of concentration, which very, very few home children possess. Sixth, as he has learned to work unaided at a given task, the kindergarten child needs less supervision. Seventh, the kindergarten child is more resourceful, and more skillful with his hands than home children. Eighth, the kindergarten child has been taught the beginnings of self-government, unselfishness, respect and reverence for the rights of others. Ninth, the kindergarten child

shows a generally higher moral development than those who come directly from the home. Tenth, the little child when he comes from the kindergarten knows how to conduct himself. With quick adaptability he comes into line with other children; in short, he has learned that he is a member of a little community in which every one has equal rights.

The foregoing is not an insignificant category: grasp of ideas, habits of observation, attention, alertness, power of concentration, self-reliance, resourcefulness, skill at hand work, self-government, unselfishness, respect for the rights of others, higher moral development, community spirit. What more could you ask of a boy whom you were about to employ than this galaxy of acquirements? Ought not his arithmetic, for instance, to be rather better with this preparation?

But this is not theory. "The primary teacher," says the principal of kindergartens of Duluth, "says that all this helps the child greatly when he comes to read. His observing powers have been so quickened and trained that he distinguishes the forms of sentences and words readily and accurately, and the interest aroused in regard to all the works of nature and the occupations of man, give the child that desire and longing for information that is the source of good work everywhere."

And she adds, very significantly: "When the child feels that a great gain is to be made by learning to read, he learns very quickly. When the adult craves information, he makes a way to get it."

It is not a development in which books and formal instruction have any part. But it is not the less education for this reason. It is the education of the perception and imagination, but especially an education of the emotions.

Dr. C. B. Gilbert, formerly superintendent of schools, Rochester, New York, makes this impressive suggestion: "Many have started on a course of criminality almost in infancy. The children of the degraded poor, and also those of the degraded rich, need kindergartens while young. We cannot catch them too early if we are to make good citizens of them."

Mr. L. H. Jones, superintendent of the state normal schools of Michigan, says in the same vein: "The period between four and six is morally a very dangerous period to children that are not well cared for in their homes. Many of the evil habits learned during this period require for their correction the strength of the teacher for many years of school life. This reason in itself is sufficient proof of the wisdom of placing the child during this period where he will not only not form bad habits, but will form good ones."

The cost of the kindergarten has been greatly exaggerated. In the public schools of Massachusetts, including high schools, the average cost for the education of each pupil is \$30.53. The average cost for each child in the public kindergartens now maintained is \$18.67. In St. Louis, where the kindergarten is most firmly established as a part of the public school system, the

cost of the kindergarten per child is \$16.12, or about \$3 less than the cost of the grade schools.

But if the statements made above regarding the efficiency of the kindergarten are true, and a year's time may be saved to the child in the elementary school, the cost of the kindergarten practically disappears.

The cost of kindergartens, however, like the cost of all forms of education, must also be thought of from the standpoint of the cost it prevents.

On "The Cost of Crime," Warren F. Spaulding, prison commissioner, writes: "It takes one tenth of the taxes to punish our offenders. From this it will be seen that the criminal is a very expensive citizen, and that the taxpayer has a pecuniary interest in the prevention and abolition of crime. Most of the crime-costs paid by the tax-payer are for the punishment of crime; comparatively little is spent for prevention."

Civic righteousness has a money value. The individual may have it for the asking, but the community must pay for it. But it is better to pay for righteousness than for sin.

The *Century Magazine* says: "Kindergartens yearly feed into the common schools fresh material, alive, alert, awake, taught to think, able in six months to do the work of a year in the old system, grasping numbers with ease and rapidity, their fingers trained to hold the pencil, the task of learning either writing or drawing half done."

President Harper of Chicago University said that "a

thorough kindergarten training saves two years in the university career of a normal child. His powers of mind are developed and trained, and he goes to his work which opens up a new field in every study pursued."

But let us get down to figures. The late Superintendent Soldan of St. Louis said: "In the St. Louis schools without kindergartens, children are admitted to the primary grades at six; in those with kindergartens, at seven. The kindergarten children ought therefore to be one year behind the non-kindergarten. But this is far from being the case. By the time the children have reached the fifth grade there is no longer any material difference in age between the two classes; and by the time they reach the highest grade, the kindergarten children are somewhat younger than those without kindergarten training."

In Des Moines, Iowa, the age of kindergarten children in every grade is actually less than that of the remainder of the class by a few months, until the eighth grade is reached, where the difference is ten months — a school year.

But there is an education for which the school curriculum does not provide, which cannot be obtained from books, which cannot be omitted without injury to the development of the child, and which cannot be measured by figures. No one will contend that there is no moral and mental development appropriate to infancy, and no intelligent person will claim that such development can be omitted with impunity. A well-

conducted kindergarten develops the apperceptive centers of every power which man should possess at maturity.

I have spoken so far of the beneficent influence of the kindergarten in preparing little children for their future work. But this is only a partial statement of the case. The blessings of the kindergarten gospel are not limited to the kindergarten itself. They have overflowed into the elementary school and are increasingly changing for the better the character of the teaching in all the schools above the kindergarten grade. The primary school has been very much influenced by kindergarten teaching, although still not enough. The kindergarten will not have accomplished its mission until the whole school system, high school included, is infused with its spirit.

There is a notion that the kindergarten makes its influence felt, on the primary school at least, only by means of the kindergarten apparatus. This is an unfortunate opinion. The so-called busy work of the primary grades has been an effective education in idleness because some good people have persisted in thinking that the schools were to be benefited by forcing into them material, much of which is utterly inappropriate to the purpose of the school. This state of things has done much to make the teacher believe that dawdling and inconsequential work characterized kindergarten methods.

To get at the truth, let us first remember that Froebel,

the apostle of the kindergarten, left us not only the apparatus of the kindergarten but also a body of doctrine, a set of principles which are so true, so inspiring, so vitalizing, as to constitute a priceless possession. When we grasp the meaning of these principles and try to apply them, we are at once impressed by their practical value no less than by their beauty. Indeed, one who becomes filled with their influence changes his whole attitude toward education. Let me illustrate.

I am very fond of Froebel's claim that there is no true education where the child is not made conscious of power. And Froebel distinctly means power. He is to be made conscious of power; he is not to be made conscious of failure.

Here is surely a beautiful thought. The keyword is the adjective "conscious." In its broader treatment it means that the child is to be made conscious of his divine possibilities. Not only must we know his power but he must know it. Unless he is conscious of his power, there is no adequate education. A child cannot develop what he does not know that he possesses. But too frequently it is not power that is emphasized by the teacher, but failure. In the marking of a language paper, for example, is not the emphasis placed on the errors? But why not also on the successes? Which will stimulate a boy more vitally, to know that he can do a thing or to know that he cannot do it? Do we like to do things we succeed in doing or those we fail in doing? Is the perpetual emphasis on error likely to make a boy so

believe in himself that he will resolve to conquer all obstacles? In morals the truth shines clearly. If a child resists a dozen temptations to do wrong and fails at the thirteenth, we punish him for that failure. That is where the emphasis is placed. His successful efforts to resist temptation count for nothing; but there is where the emphasis belongs, according to Froebel. With us his failure is all that counts. Surely our duty is to make him conscious of his power when he succeeds. He will try the harder next time. This does not eliminate punishment, but it eliminates most of the conditions that make punishment necessary. So it is with the curriculum. The earnest, honest effort is the important fact, for herein lies the consciousness of power; the error is the subordinate matter. The subject is a fascinating one. It is a subject which teachers have studied only in its elements. That the vital principle involved dominates our educational practice is far from the truth. When it does, not only will our methods of teaching be revised, but our marking systems will not compare child with child, for the premium will be based on the only possible comparison, that of the child with himself. In that happy day our merit lists will not exalt one child and humiliate another, and the "*cum laude*" on the high school commencement program will disappear with all other ingenious contrivances for emphasizing partial defeat. We shall then learn that all methods which make a child believe he cannot achieve are vicious.

Here are no blocks or zephyr or other occupation

materials, but every one must admit that we are in the presence of a principle that goes to the very basis of child training, whether at home or in school, and at all ages. In the kindergarten the principle is described as self-revelation.

Let us look at another Froebelian principle. Translated into ordinary speech, it expresses the demand that all methods should be based upon data afforded by the children themselves. It would seem that when children in large numbers, here, there, everywhere, resist a subject or method, that subject or method is wrong at that stage of their progress. And, conversely, when the children receive a subject or phase of a subject gladly, it would seem that that subject or phase of the subject is clearly indicated as right. Indeed, one might deduce a law regarding the appropriateness of subjects, or the time and method of their introduction, to be known as the law of the least resistance. Now what are the facts?

How long did it take us to learn that arithmetic has no place in the earlier grades? For years and years the children said so. They resisted the subject, learned it with the greatest difficulty, and forgot it with the greatest facility; their acquirements were insignificant, and if the subject was omitted in the first grade the children were as far along at the beginning of the third grade as if the subject had been taken for two years. From a Froebelian point of view this amounts to proof, and the educational world is gradually accepting the only possible conclusion. Why were we so slow? Merely because

we evolved the appropriateness of arithmetic from our heads and not from the facts of childhood.

Conversely, why have we been so slow in learning that little children are the best language students in the world, that early childhood is the golden time for language? And specifically, how slow we are in learning that the child's speech is oral speech and that written speech is an exotic. In oral speech the child is fluent and idiomatic, and reveals himself. In written speech he is artificial and clumsy, and does not reveal himself. He comes to school with plenty of language; we put a pencil in his hand and freeze him up. The written speech will develop, but not yet, and very slowly. It is a misfortune and an error that we do not derive our courses of study from children, but from our own self-consciousness. But Froebel says the child must be our chief study. It would seem that to many superintendents, in preparing courses of study, it has never occurred that there are children in the world who could be seen if it were thought that that were really necessary.

What but a perverse or ignorant disregard of Froebel's law, a disregard of the richest field of data, the children themselves, will explain the vagaries of nature study? Any one who will read the curricula on this subject for the last twenty years will come to the conclusion that for the most part the facts of childhood, children's loves and tendencies, have been the last thing thought of. Slowly, we are tending in the right direction, but not from any consciousness that the children must determine the course

of study, which is the Froebelian law. To give an example, and, at the same time, be specific, the love of children for living things has been ignored or catered to accidentally in the primary and lower grammar grades, and is now very slowly receiving systematic consideration.

These instructions might stretch on indefinitely. Let any one apply just this one law to our schools and trace the long line of violations in courses of study, in the time at which subjects are presented and in the special method of presentation. One need not stop at the primary school. He may pursue his investigation through the grammar school and the high school. Indeed, he will find the high school a very Golconda of false methods from the point of view under consideration. Suppose we were to open our eyes to the facts of boyhood and girlhood and humbly be guided by them, and base our teaching and courses of study upon them, abandoning egotism and tradition. A genuine revival in teaching would come to pass. That is the gospel of the kindergarten.

Finally: let us think of another Froebelian law — that of self-activity. I have discussed this before. I desire at this time only to link the idea with the kindergarten law. The meaning of the law is easy to understand. It is the right of the pupil that no one shall tell him his mistakes unless he does not know that they are mistakes. Every time a teacher shows a child his error in anything, he violates the law of self-activity and retards his education.

The self-activity of the child is, at the beginning, of the

most modest kind. The fact that he goes on day after day doing things that he knows are wrong indicates how little real effort he is putting forth. But why not demand the full quota of his self-activity, as indicated above! Why should not the child be feeble? Why should not the results be inconsequential? The teacher assists when there should be no assistance, he explains when there should be no explanation. He interferes with the child's right to do things himself, he meddles, and this he does all the time and in a systematic manner as if with a settled theory as to its propriety. When the malign practice based on this theory is persisted in year after year, the tendency is to necrosis of the will. Some high schools make one think that this disease has actually set in.

And the law holds good in the learning of things as well as in their practice or drill. No teacher has the right to help a boy to understand an application of percentage that he can understand without help. It is a wrong done to the boy. He is defrauded of the right to exert his own powers, through which exertion alone, in Froebel's opinion, he can be educated. It is surprising how much even the very little children of the first grade do for themselves. We teach them reading, of course, but if in addition to the formal teaching we give the child unlimited facilities for interesting and appropriate silent reading, put him in a bath, so to speak, of silent reading, he will soon demonstrate how unnecessary much of our teaching is, and if unnecessary, then, of course, how injurious. The formal teaching will go on, but it

will rapidly change its character, for the children have become partners in the business. This lesson is learned by few teachers. The formal reading lesson appears in the upper grades as a method of teaching reading. Indeed, we are forever teaching reading. We seem never to be able to say we have taught it. The conferring of the power to read from the printed page should have been completed in the lower grades. The oral reading lesson has its function in the upper grades, but that function is not to teach children how to read.

The application of this idea to moral education opens up a fascinating field of thought, but we can only hint at it here. Briefly, if by discipline we make it impossible to do wrong, we at the same time make choice impossible. Activity implies resistance. If there is no possibility of resistance (that is, if it is impossible to do wrong) there is no exercise, and if there is no exercise there is no growth. There must be choice, and choice means self-activity.

Here again, the widest field for thought is opened up. Eliminate the violation of the law of self-activity and the public schools would not know themselves. But then we would be doing only what every true kindergartner proposes to herself. The child leaves the kindergarten, where self-activity is always predicted of him. He goes into the grades, where, to a very large extent, self-activity is an unknown quantity, and where it is likely to be accidental when it does enter.

All education is continuous. The artificial terms

which we apply to distinguish various stages of progress in the child's development should not denote different things but different phases of the same thing. The standard for all education, by whatever artificial designation we describe any of its phases, is the immutable law of child development.

When reduced to its simplest statement, this is what the kindergarten stands for, — the immutable, the divine law of child development. Froebel's famous precept is, "Come, let us live with the children." This does not mean the babies only; it means the boy, the youth, the maiden, the high school student, as well. It is the ultimate principle of education. Froebel says: "The object of education is the realization of a faithful, pure, inviolate and hence holy life." I am enamoured of his definition of education. He says it is the development of the divine unity in every child.

CHAPTER III

CONTINUITY BETWEEN THE KINDERGARTEN AND THE ELEMENTARY SCHOOL

IN passing from the kindergarten to the primary school there is a break. Do what you will to soften the change, to modify the break, it still remains a break. Three general methods of dealing with the difficulty have been employed: (1) To provide a connecting class to take the child out of his kindergarten habits and introduce him to those of the primary school; in the words of some teachers, "To make him over." (2) To modify the kindergarten so as to make it more nearly resemble the primary school. (3) To modify the primary school so as to make it more nearly resemble the kindergarten. There is only one effective way to continue the vital development of the child through his whole school course. All teachers in primary, grammar, and high schools should be trained in the fundamental principles of Froebel.

Now if anything is clear in the Froebelian doctrine it is this, that there are no breaks in human development and should be none in education. The human being shows wide variations when we compare him with himself at different periods of his life, but these changes always take place gradually. This is Froebel's language:

“Sharp limits and definite subdivisions within the continuous series of the years of development, withdrawing from attention the permanent continuity, the living connection, the inner living essence, are therefore highly pernicious, and even destructive in their influence.” And the truth is not only Froebelian, it is self-evident, it is common sense.

It seems, therefore, that the fact of the break just noted is not only un-Froebelian, it is unpsychological, it is not common sense. It indicates that we have abandoned the simple principles of Froebel, of psychology even, and have intruded ourselves into the problem. We have introduced an artificial consideration somewhere, or we should not have this glaring absurdity in our school system staring us in the face.

For, let us note, we are not to “make the child over”; that is precisely what we must not do. In succeeding in making the child over we do him an injury even if he were wrong before, for Nature does not make things right in that way. The suspicion might arise in such cases whether it is not the teacher who needs to be made over.

Let us note further, in view of this thought of continuous development, that the primary school is not to approximate the kindergarten. Who had a right to make the kindergarten a standard? It would be a standard, by the way, exceedingly hard to define in the divergent practical aspects it now presents to the educational world. And still further, it is equally

illogical to speak of approximating the kindergarten to the primary school.

There is no kindergarten, there is no primary school in any such sense as the terms are understood in such a discussion. There is but one fact that is real, and that is development. The artificial terms which we apply to distinguish various stages of progress in this development should not denote different things but different phases of the same thing. But the terms kindergarten and primary school imply a sharp distinction, a sharper distinction, indeed, than that between the first and second grades of the primary school. This is not the only place in the school course in which, as a result of the use of terms, a sharp dividing line is drawn where no such line should be. A striking example is to be found in the attitude of high school teachers toward grammar school boys upon their entrance into the high school. The friction that suddenly develops at this point and the failure of the entering students both as regards discipline and scholarship are well known to teachers. The explanation is simple. The student has not changed his identity in entering the high school, but the high school teacher thinks he has just because he has been given a new name.

Let us start, then, with this proposition, that to standardize an artificial thing as a basis of comparison with another artificial thing is unpedagogical. This postulate having been grasped, the logical course becomes very clear and simple. The standard for all education, by whatever artificial designation we describe any of its

phases, is the immutable law of child development. The kindergarten is logically but an expression of this law for one period of school life and the primary school, grammar school, high school, and college, expressions for other periods. We have claimed far too little for the Froebelian doctrine when we have timidly advocated its application to the primary school. It is not only applicable to the whole of education; it is its inexorable law. In the following discussion, no attempt, therefore, will be made to confine Froebelian thought to primary education.

Let us assume that the law of child development is conveyed with reasonable adequacy in the Froebelian philosophy. This assumption is near enough the truth — indeed, it is wonderfully near the truth. What are the lessons to be derived concerning the conduct of the kindergarten and the subsequent education of the child?

Let us consider first the post-kindergarten period, the period of the so-called grades. Usually a most optimistic state of mind is evident. The influence of the kindergarten on the primary school has been taken for granted, and the spirit of the primary school has been shown to have changed for the better along the lines of Froebelian thought. Besides this, the kindergarten material has entered the primary schools. The writer is far from entering into full participation with this optimism. One may gratefully and gladly concede that such a change in spirit is evident, but he must repress his transports when he begins to realize to how limited an extent the change has taken place. The superintendent who

longs for the Froebel millennium must sadly admit that many a primary teacher has received but little of the divine fire, and that in the cases of many more the new spirit is at best a modifying influence and by no means a dominating one. In the grammar schools the picture is darker, and in the high school almost invisible. Again, and this is the important consideration, the influence which has brought about the happier condition is, so far as the teacher is concerned, not consciously that of the kindergarten. It may be, and to some extent doubtless is, indirectly that of the kindergarten, but the teacher who is affected by it does not know it. This is the same thing as to say that the vitalizing Froebelian thought which has done so much for the kindergartner has done little for the primary teacher, and that little in a round-about way. The real thing is clearly seen when the kindergarten-trained teacher enters the primary or grammar school. No greater blessing has come to the schools in these later years than the entrance of the kindergarten-trained teacher into the grades. But often even she sees but dimly the beauty of the gospel she has learned, except as it is revealed in orthodox kindergarten lines of expression. Nevertheless, the possibilities of such young women under a sympathetic training are most hopeful. They make our best primary teachers. It is a question, however, whether the introduction of the kindergarten material into the primary schools has not been productive of as much harm as good. These materials have no value in themselves. They re-

ceive a value in the kindergarten because they furnish a medium for the expression of a Froebelian thought. But to the primary teacher they have no such value, and to the kindergartner, acting as a primary teacher, they are likely to lose their meaning when divorced from their standard use. Such materials have become the occasion of a frightful waste of time, as all the materials must that are used without a comprehension of their meaning. In many cases they are relegated to the time allotted to the out-and-out idling known as "busy work."

It can never be said that the principles of Froebel are acting on the school until they act directly on the teacher. And it must further be kept in mind that kindergarten materials and kindergarten methods have nothing whatever to do with the matter. The methods and materials will be determined by the facts of the case. It by no means follows that because the blocks and tablets and zephyr furnish an adequate means of expressing a Froebelian principle at the sub-primary or so-called kindergarten age, the same material is its adequate expression in the fourth or seventh grade. The method and the material vary, the material may even disappear, but the Froebelian principle is evermore regnant. The logical mode of procedure would seem to be: given a principle, what is the proper method or medium for its expression at this or that point in the child's progress? If we search for the violations of this obvious principle in our teachings, their grossness, importance, and frequency will be startling.

As a further illustration of this broad treatment of the elementary school from a Froebelian point of view, let us think of another Froebelian law — that of self-activity. In the usual discussions of this law we seem to be unable to see in it anything but manual training. But its application throughout the course of study should be universal, and its violations are so numerous and disastrous as to suggest the suspicion that the principle enters only to the most trifling extent into school administration.

The pupil reaches the upper grades of the grammar school and the high school, it is claimed, weak in the technique of writing, and feeble as regards thought. In passing, why should his thought not be feeble? So much mental effort must be expended on form that he has none left for thought. If technique could ever become automatic, his whole effort could go out to the thought. But technique becomes automatic very slowly, under present conditions, and never reaches any high standard unless, indeed, it becomes automatically wrong. That is a result that may be attained with surprising rapidity.

One specific illustration of the great law of self-revelation must suffice for this part of the discussion. There is an interesting statement in Froebel's discussion of the teaching of language, to the effect that, through reading, man attains personality. The substance of the discussion is that through reading the soul is raised into self-consciousness. But who can watch a reading lesson in most primary grades and believe that through it the child's soul is attaining self-consciousness? The monoto-

nous expression, the apathetic looks of the children, the fitful attention and feeble interest, all indicate what is being attained, — a slowly developing power to translate the characters in the book into speech. But the vital fact of reading as an art whereby the child discovers himself is practically, if not absolutely, absent. The teacher looks for it in a hopeless way or not at all. The child must discover his personality, not through words, nor even through the meanings of words, but through the thought of the story. Therefore the story is the principal aim of the teaching, the power of word recognition the subordinate aim, for the former is the reason for desiring the latter. There is many a teacher who would stare if he were advised to tell or read the story frequently before developing the words.

This perfunctory treatment of reading in the earlier grades is continued in the later grades in a most absurd manner and is paralleled in the other subjects of the course. The Froebelian idea is that the study is of value, not in itself, but in view of its reaction on the divine essence. But much of the teaching that we see places the emphasis on the subject in innocent oblivion to the existence of any such thing as a reaction. How else is the dominance of the fetish known as arithmetic to be explained? Here matters are frequently taught, not because of their reaction or even in view of their subsequent usefulness, but just because they always have been taught. For example, the teacher spends considerable time in teaching, drilling, and reviewing a subject known

as "Least Common Multiple," with the full knowledge that he has never used the process in his life, except to teach it, and that the pupil never will either. It is merely a matter of tradition.

Here we are face to face with the great parting of the ways. Froebel says the fundamental consideration is the child, his personality. All else is to be considered in view of its reaction on this divine entity. The opposing view holds: there are subjects to be taught. The child is a convenient thing to teach them to. You cannot teach geography without children. Therefore we must have children in the schools, but the geography is the important fact and the child must accommodate himself to it. Included between these two extreme views range the teachers of the country, the mass practically adhering to the un-Froebelian view. Once more, let us search our practice. Let us bow to the Froebelian law of self-revelation. Let us make the child the starting-point for our courses of study and our methods. When we do that our schools will be revolutionized and the Froebelian thought will be incarnated in our children.

It is necessary to deal thus frankly with the post-kindergarten section of our school system. It is necessary to show that the Froebelian doctrine, not the kindergarten, is the standard. It is necessary to show, also, that the change in courses of study, in methods of teaching, and in every detail of school administration that must and will come from an honest effort to realize the Froebelian thought, is startling.

But what of the kindergarten itself? Are all kindergartners really true to Froebel? Do not some of them exalt the letter above the spirit? Froebel made two bequests. First, he bequeathed us a body of doctrine which is so true, so inspiring, so vitalizing, that it is a priceless possession. Modern psychology has modified some of this doctrine. That was to be expected, and the contributions of psychology should be gratefully acknowledged. Surely a man like Froebel, who looked at truth with such open eyes, must have himself expected that this would happen. But modern psychology has also given its indorsement to most of Froebel's teachings, to all indeed that we hold dear.

Second, Froebel bequeathed us a series of directions to enable us to concrete his principles. Most of these relate to the sub-primary period of instruction, the so-called kindergarten period. A few relate to the conduct of subjects in later grades. It was to be expected that eventually two schools of kindergarten practice would develop, the one emphasizing the Froebelian principles, the other the Froebelian practice.

Is it not fair to press upon the attention of kindergartners the same mode of thinking which we have demanded from the Froebelian standpoint in the foregoing treatment of the so-called grades? When a kindergartner insists on the use of a series of gifts and occupations just because they were prescribed by Froebel, or any one else, how does she differ from a primary teacher who persists in using methods that also have the sanction

of many honored names in the past? If the kindergartner claims that she is using the materials because they express the Froebelian principles, then she must in all fairness demand that we follow throughout the post-kindergarten course the methods of teaching drawing prescribed by Froebel. In the present development of art study in the schools, this would be the *reductio ad absurdum*. Indeed, from this point of view it must be admitted that the primary school has shown more openness of mind than some of the champions of the kindergarten. Are we not indeed violating the fundamental demand of Froebel himself in exalting the practice above the principle? Listen: "For the living thought, the eternal divine principle, as such demands and requires free self-activity and self-determination on the part of man." Why should this self-determination be granted to the child and be withheld from the teacher? Is not its application universal?

The fealty of the kindergartner to Froebel is beautiful; and she has fought so many fights in his behalf that every fact of the kindergarten has become dear to her. Yet the great fact remains that if all education is to fuse into one, the kindergartner must do as she expects the primary teacher to do, sit at the feet of the children and ask them what is right. They know and they only. They do not know that they know, but they know, and they will tell us if we know how to ask and are not too proud to ask. No method of embodying Froebel's thought, no matter how valuable, can stand a moment

after we have discovered a better. The principle of self-activity is eternal; the third gift is a possible expression. It was Froebel's expression, but after all the important consideration is the self-activity and not the third gift. It must be expressed in a thousand ways in the primary and grammar and high school grades. Why are not many ways possible in the kindergarten?

It seems to the writer that the truth of the postulate laid down early in this article is unavoidable: that all education is one and that breaks are illogical. If this be true, unity so far as the Froebelian doctrine is concerned must come from an absolutely honest and unflinching application of the Froebelian laws to all school life, and this means the kindergarten as well as the primary or grammar school. When that consummation is reached the kindergarten as a distinct institution will have passed away, or rather it will have absorbed within itself the whole of education. That will be the day of its transfiguration. The day is hastening. And when one thinks of the idea of the divine purpose that runs all through the Froebelian writings, surely it is not irreverent to say of that day, that "then the whole earth shall be filled with the knowledge of the Lord as the waters cover the sea."

CHAPTER IV

GUMPTION

It is related of a learned judge that he once praised a retiring witness in the following words: "You are entitled to great credit, sir. You must have taken infinite pains with yourself. No man could naturally be so stupid."

The English dictionary admits the word "gumption" and classifies it as colloquial. It is therefore a respectable word and it certainly has a respectable origin if any one cares to look it up. Like most homely words it gives the feeling of meaning just what you want a word to mean and to mean nothing else. The dictionary definitions are "capacity, shrewdness," but these do not satisfy. Let us come back to gumption.

If one should demonstrate that the schools (including the high schools) of America are turning out a mass of graduates lamentably deficient in gumption, he would raise questions of the most alarming character. For of what value is it to teach ever so much arithmetic if the boy has not the common sense to make use of it? The purpose of the school is not to put a child in possession of this fact or of any number of facts. It is to develop the personality so that it shall be of the greatest possible service to him. No two children bring the same endowments into this world. But whatever his endowment,

a child has the right to demand of his education that it shall put within his reach all the prosperity, happiness, and usefulness that the endowment will yield.

In "A Message to Garcia," Elbert Hubbard says:—

"No man has endeavored to carry out an enterprise where many hands were needed, but has been well-nigh appalled at times by the imbecility of the average man — the inability or unwillingness to concentrate on a thing and do it. Slipshod assistance, foolish inattention, dowdy indifference, and half-hearted work seemed the rule; and no man succeeds unless by hook or crook or threat, he forces or bribes other men to assist him; or mayhap, God in his goodness performs a miracle and sends him an angel of light for an assistant. This incapacity for independent action, this moral stupidity, this infirmity of the will, this unwillingness to cheerfully catch hold and lift, are the things that put pure socialism so far into the future."

Fifty years ago the writer of "Artificial Production of Stupidity in School" said of English education: "With the exception of being perhaps able to read with labor, and to write with difficulty, the pupils must not be expected, six months after leaving school, to possess any traces of their 'education' beyond an invigorated sensorium and a stunted intelligence."

Although there have been many discoveries in education in fifty years, nevertheless, if these witnesses are to be trusted, the product of the system continues monotonously similar.

Let us face a very disagreeable fact. No one who thoughtfully considers the data offered by thousands of schoolrooms can come to any other conclusion than that our practice, at least, is fundamentally wrong. The striking characteristic of the schoolboy is his attitude toward his work; an attitude of apathy, of unwillingness, and apparent inability to grapple with a difficulty.

To an extent that would be alarming if we had not grown so accustomed to it, it may be said that the pupil does not care. He goes to school because he is sent; personally, too often he would prefer not to go. In school he does the things he is told to do. He does them sometimes well, often indifferently, sometimes very badly. He does not see their importance; it never occurs to him to raise the question of their importance. Sometimes he gets interested in the thing he happens to be doing, but the interest is passing and, too often, feeble. He makes blunders in writing English not because he does not know how to write correctly but because he has no defined interest in trying to write correctly. It is not necessary to assume that he desires to make these errors; he has no desire of any kind in connection with the matter. Place him in the baseball field and he is alert. His whole being is given to the game. But in his language or arithmetic lesson he is inert. He will bring in twenty-six dollars as the price of a pound of butter with complacency. If it suits the teacher or the answer in the book, it suits him. The incident for him is closed. A flashlight is thrown on this state of

things in a question of one of her Majesty's inspectors, in the book from which I have already quoted. With admirable naïveté he italicizes this question: "To what purpose in after life is a boy taught, if the intervention of a school vacation is to be a sufficient excuse for entirely forgetting his instruction?"

Associated with this state of things is the absence of that valuable, if homely, quality of gumption. It is really part and parcel of the same trouble. The boy does not bring to his work the wit he has. He makes little effort to comprehend a situation, and of course he does not comprehend it.

The most melancholy fact concerning this whole matter is that the boy grows worse throughout the course. Necessarily, it cannot be claimed that this is the case with every child in our American schools, but it describes a condition so general that one could blunder in on its realization almost anywhere and would really have to try to avoid it.

Now there is no education without self-activity. What we do for the child counts but little in comparison with what he does for himself. To send a child out furnished with facts and with such a training in relation to the duties of life as we have described; to send out a child with no serious purpose up to the time he enters the world of business, is to doom him to mediocrity or worse. Sometimes a boy is stimulated by the excitements of the real whirling world of business, but in general it is probable that the mind has acquired a permanent set; he

has had no training in facing problems, and he must give way to the man who has.

I have often desired to try this experiment. Take a class of boys and for one week pay each boy ten cents for every example he worked correctly within a given time. For every example that was wrong not only fail to pay this bounty but also deduct ten cents from his earnings. Treat all the errors in his compositions in the same way. I have an impression that there would be more arithmetic and language taught that week than during any previous week of those boys' school lives.

But this hypothetical case brings us directly to the pupil's solution of the problem by suggesting a very simple explanation of the boy's apathetic attitude. He thinks the effort is worth while for the money but is not worth while for the considerations we usually offer. He will "deliver the goods" if he sees any profit in the transaction. The theory often receives confirmation in the classroom in ways that are mysterious to the adult. Good work can sometimes be obtained by a promise to dismiss a half hour early all who offer the good work. A match will bring out better work than a recitation; there is the sport element here. The old device of "going up head" is based on the same principle. All this means that there are considerations that the pupil thinks worth while and others that he thinks are not worth while. Whenever a teacher uses the worth-while consideration he gets effort from those who think it is

worth while, even though the motive which the boy thinks worth while is a poor one.

But what are the motives which the school generally offers? I remember the comment of a wise superintendent on the employment of early dismissal as a motive: "That," said he, "is wrong in principle. You hold up to the pupil that to avoid the opportunity for education is a good thing, whereas you know it is a bad thing. Now, if you should say, 'Every one who does good work during the day may stay and continue his education another half hour with me,' you would be logical." I confess I cannot see the flaw in this reasoning, but every teacher knows how it would work. At least every teacher thinks he knows. But the cases of pupils who have actually asked the privilege of working overtime in manual training are so numerous that perhaps, after all, we do not know. And yet I never knew a child to ask permission to stay after school that he might continue his parsing.

Let us look at the inducements we offer and the estimates of children thereon. First, the value of education itself. Too vague; value not clear; too far off anyway. Second, success in the world as a result of education. Doubtful; cannot see how; at any rate the thing is pretty far off and no use of thinking of it for some time yet. Third, approval of teacher. Effective with some, but with most, though more or less desirable, yet on the whole not worth the trouble. Fourth, marks, ratings. Rather better than the preceding, indeed

worthy of consideration now and then but not enough to warrant one in making himself uncomfortable. Fifth, rewards, prizes. Rather effective with some, but falling short of a first-class stimulant; falling far short, for example, of a half dollar for a good week's work. Finally, promotion, graduation. Tolerably effective during May and June.

There are certain standards by which the child unconsciously tests the inducements that are presented to him. First, the thing offered must be within his comprehension; second, it must appeal to his views of what is desirable; third, the realization must be speedy; fourth, it must affect his material comfort; fifth, it must have to do with the living world.

The public has demanded that we teach things rather than boys. The superintendent writes a course of study in which he introduces these things and the board of education approves the superintendent's work and adds official indorsement. All that is now needed is to teach the "things" faithfully and carefully and the end must be blessed. Knowledge is poured forth like water. "Let him that is athirst come and drink." And together we all constitute "The Society for the Confusion of Useless Knowledge."

For alas! the important element is not the thing but the boy. If the boy is aroused in school to the resolute endeavor which he shows in his play, the wisdom of the teacher and the course of study have borne their choicest fruit. If he is not thus aroused, no system of teaching

facts, however orthodox, will ever lead him into the realization of his rightful heritage.

My protest is against the stunting of the intelligence, the atrophy of the mental life, the artificial production of stupidity. These things are being done on a large scale. There must be a remedy.

A Harvard student was being shaved by a Boston barber at a time when Harvard was having a series of misfortunes in the athletic field. It is said that the barber expressed himself to the student thus: "What is the matter with your college? You can't play baseball, you can't play football, you can't row. What good is your college anyway? All you can do over there is to get an education."

How has such a standard of educational value been established so widely? The sum of the matter is this, the child is not interested, his real being is not awakened, and he emerges from school in an undeveloped state, with no adequate comprehension of himself or of the world he is to enter. He has lived in an artificial world in school; the real world has been concealed from him. His opinion as to the relative importance of things does not differ materially from that of the barber and, indeed, it is probable that the Harvard student was also in substantial accord with the barber.

If the barber placed baseball above education, it is because he could see something worth while in baseball, but his views on the advantage of an education were hazy. With the student exactly the same state of

mind generally exists. When we can make him really believe in an education as he does in baseball, he will probably hold the same attitude toward education as he does toward baseball.

But before this can come to pass, our educational scheme must conform to his unconsciously applied tests of desirability. Let me repeat them: First, the thing offered must be within his comprehension; second, it must appeal to his views of what is desirable; third, the realization must be speedy; fourth it must affect his material comfort; fifth it must have to do with the living world.

I desire to concentrate attention on the last consideration, the child's relation to the living world. The subject of course is not so simple as to be settled by one consideration. On the contrary, it is very intricate. But the relating of the child to the real world goes down deep into the problem and, besides, is the real explanation of the necessity of those studies of the course whose importance is but little understood by the public, or, indeed, by the teacher himself.

The moment one really becomes clearly conscious of this characteristic of childhood, this innate tendency of a child to relate himself to the world in which he finds himself, the whole question of child-training takes on a new aspect. The fact itself cannot be doubted. When the infant imitates what his elders do he is seeking to adjust himself to the outside world, for his elders constitute his world. When a small boy smokes a cigarette, he

does not do it principally because he wants the cigarette, but because it is a large thing to do. The grown-ups do it in the street. He seeks to come into accord with the world. He takes a deep interest in the elections. He does not understand them. It is sufficient for him that they are interests of the big world. He yearns to go to work not because he loves to work but because the world fascinates him.

It does not follow that he is fond of the world's work, or that if he were really in the world he would not quickly weary of the part of the world in which he found himself. But this does not set aside the main fact. It is true that the boy does not love monotony, nor drudgery, or hard work, but he loves the world; its interests make their appeal just the same.

Now, if the school can be so managed and conducted that the child will really believe it is a part of what he understands by the world, it may receive from him all that appreciation with which he regards the affairs of the world. Let us try to apply this theory. A new phrase has become current. It is not really new; it is only the currency that is new. The phrase is "vocational education." All education that directly tends to prepare the child for his work in the world is vocational. It may be industrial, commercial, agricultural, professional. The very term vocational makes an appeal to a living interest. Let us think of vocational training in the light of the thought we are considering, the tendency of the child to relate himself to the real world.

Here indeed is where the industrial idea makes its appeal. It is easy to illustrate. Why do we spend weeks in teaching the arithmetic of the laying of carpets, and more weeks in the plastering of walls? Most children are not going to lay carpets for a living. It is not a particularly fascinating subject to a child's mind. We must teach area, and the carpet business, within limitations, has its place. But the printer around the corner, whose office the boy knows, is going to print some programs for the school. How large is the paper from which he cuts? How many programs from a sheet? How many sheets for a thousand programs? A supposititious program will not do. The program in the examples in the book will not do. It must be the very program that this school is to have printed at Mr. ——'s printing office. The industrial idea immediately enters. Before the class is through with the job they know a great deal about printing, and what is best of all, the work is connected with life.

Again, the exercise paper in school is given out. What are its dimensions? In what sort of a package does it come? Who supplies it? Where did he get it? We go back to the paper factory and the paper as it came in a roll. How wide was the roll? Where was it cut? How many pieces to a pound? How much does our package weigh? What are the freight charges for transportation from the factory? Paper manufacture thus enters the school from the great living, striving business world.

One more illustration in arithmetic. They are repaving a street near the school. How wide is the street? (Actual measurement by pupils.) Who has the contract? Price per square yard? Why per square yard? How much for the city block nearest the school, etc.?

Turning to geography, we visit a White Star steamer. What does she carry? Where is it from, and from whose factories? Where does this engine go? To what city, what concern? What is the ocean freight? What was the railroad freight and the cartage to get it to the ship?

In all this there must be field work, actual inquiry. But the work is no longer a series of supposed cases in the arithmetic or geography, however reasonable. The arithmetic may well give the suggestions to the teacher, but they must be worked out in the pupil's own neighborhood and become a part of his actual experience.

It is clear to me that the curriculum may be easily manipulated so as to introduce the industrial and world flavor. But it is also clear, that because this industrial flavor does not enter, the work of the school drags and apathy is in the ascendant. Why should it not be so? The child sees little connection between the school-room and the outside world. Huckleberry Finn was much interested in the story of David killing Goliath until he found that David was dead. Then his interest immediately ceased, for he "had no use for dead folks." The child in school is evidently in the midst of dead things; at any rate that is his attitude. It is very easy to place him among the living.

Such teaching as I am advocating has been advocated for a long time and has been actually carried out by a few advanced teachers, but it is lamentably true that the idea finds but few followers among the rank and file of teachers. It sums up the argument for industrial education, an education which is closely related to actual life. You cannot put a ten-year-old boy in a shop school, but you can bring him into close touch with the shop, the factory, the ship, the bank, with commerce, and with the whole world of business, before you have changed his course of study at all. Why is not such a treatment of the child the logical preparation for industrial education? Why should we wait until a boy is fourteen years old before we wake him up to the fact that he is living in a real world?

In the shop school of the General Electric Company at Lynn, the students spend a part of their time in the shop and a part in the classroom. But the classroom is directly related to the shop. There are three incentives for good work in both departments, all of them very worldly: first, there is the salary; second, the expectation of being advanced to more important work in the shop; third, the possibility of losing the job altogether. The work thus takes on a highly practical caste and the word practical always brings us in contact with real affairs.

But the world is not only the world of affairs. There is a world that we call nature which is just as real and just as inviting as the world that we call business. The child

should have a part in the real life of the world, but he should also be brought into close and loving touch with the great and deeply interesting world of Nature. That the child should grow up and know nothing of the things that grow, the sun and moon and stars that shine, and the earth and the sea, is an injustice to him. But it is also a mistake, for if my contention be true that the child seeks life, then, by shutting him out of that life, we are again drying up the springs of action, we are helping to create that apathy which is the nightmare of popular education.

There are changes in educational practice that have been made in recent years, which are not for the better. Not everything that is new is good, and much that is old is very good. But the great change, a change that is in the highest sense beneficent, is the change in attitude; it is a change on the part of the teacher from the infallible schoolmaster attitude to that of the humble learner. We have reaped the harvest of our infallibility and we ought to be more humble than we used to be. We have found out that education is like language; it cannot be forced into the student, but it is easily absorbed. We are beginning to suspect that the child will take to education as he does to baseball, but only when the baseball conditions are present.

We have not all of us found this out. With many of us it is the story of "The Calf Path." Several hundred years ago the calf found its way home across the fields and through the woods by a very crooked path. The

next day a dog followed in the same path ; then the sheep followed, and then men, until the path became well worn and traveled. In the course of time it became a lane, a road, and finally a city street, but the zigzags that the calf made were faithfully preserved. No one had ventured to straighten the path.

There are yet many calf paths in education.

CHAPTER V

MANUAL TRAINING

IN the latter part of the nineteenth century the public became much exercised over what it regarded as the unpractical character of American education. The schooling of our youth was exclusively from books, and our graduates swarmed into offices and stores fit for nothing but clerical duties and not very fit for those. Manual labor was looked down upon by our boys and girls; those vocations requiring the use of the hands were suffering for competent workers. In the early nineties, Dr. Maxwell, superintendent of schools of Greater New York, said: "The movement for manual training is the protest of the people against the hide-bound conservatism of the schools; it is the demand for what will be of practical value as opposed to what is merely or largely ideal; it is the cry of thinking men and women to schoolmasters and school boards. Stop the memorizing of useless details and teach our children to form habits of industry, train their minds to plan, and their hands to execute." The feeling brought about a searching of hearts on the part of the educational world, and this resulted in manual training.

But manual training, alas! furnishes an illustration of a great popular demand deliberately set aside by the

influence of the educators. It is perfectly clear and can be proven from the discussions of the day that what the public wanted is what is now called industrial education. What they got was manual training, which, with all its merits, is not industrial education. In an address made in 1882 by Dr. James MacAlister, one of the foremost advocates of manual training — then superintendent of schools of Philadelphia and subsequently president of the Drexel Institute — occur these words: "I cannot avoid the conviction that very large numbers of young persons are really debarred from obtaining any benefit from secondary schools because of the limitations imposed upon their curricula. Nearly one half the class leaves at the end of the first year. We shall not have to go far to find an explanation of these facts. The parents soon discover that the education which their children are getting is not going to be of much practical account to them in the business of life, and so the pupils are withdrawn and are placed at work. It must not be forgotten that by far the larger proportion of these young people are intended for industrial pursuits."

• It is very significant of the meaning of the popular movement that New Jersey in 1881 passed a law subsidizing industrial education, and not until 1888 a law subsidizing manual training. If the legislators reflected public opinion, it is clear that this movement at the outset meant industrial training. But the advocates of manual training most strenuously protested that they were not teaching trades. They were giving boys the ele-

mentary instruction that would fit them to enter any trade, and if they did not enter a trade, would supply such a training for the eye, the nerves, the hand and for all the mental faculties that the pupil would be better fitted for life. But to teach trades was un-American, it was to introduce the principle of caste. The American educator was not in full sympathy with the popular demand. He gave the public not what the public asked, but what in his opinion the public ought to ask. It appeased the public, the clamor died away, and manual training became an institution.

It must not be inferred that because manual training is not industrial training it is not a good thing. It represents a most beneficent forward movement in education. The following are some of its benefits:—

While the subject has not pretended to fit the student for actual life it has nevertheless done so in a most remarkable way. The records of the graduating classes of the manual training high schools of the country show a strikingly large percentage of young men who have gone into positions of trust and responsibility in the mechanical world. The advocates of the subject are too much inclined to belittle this great result in their efforts to demonstrate the purely educational advantages of manual training. For example, in a recent address at Washington University the speaker said of the earlier history of this subject, "Many thought the institution would develop into a trade or industrial school. In that case they could see the 'bread-and-butter' utility of

manual training, but could see in it no genuinely educative value."

The advocates of manual training have been insistent that it should not be identified with manual labor. Dr. Calvin Woodward, one of the most prominent of these advocates, says, for example: "Manual training is not trade instruction, not work in which the usefulness of the articles made is of greater importance than the making of them. It is not the acquisition of skill in the use of a tool for the purpose of securing business advantages."

It would be better if the "bread-and-butter" side were more thoroughly appreciated in our own country, and, it must be added, this side is rapidly coming to the front. Our foreign critics have juster views. Dr. Duncker, Commissioner of Industries in Berlin, in a Report to the Imperial Secretary of Commerce and Labor, makes these observations on American manual training: "The manual training high school does not send forth people who are anxious to get away from the world of reality and who look with contempt upon manual labor. The shop work, in charge of efficient teachers, promotes an appreciation of manual art and a respect for manual work. This idea that every kind of decent work is honorable is one of the firmest pillars of American greatness."

Professor Ripper, Professor of Engineering, University College, Sheffield, England, states the outcome very simply and truly. "While it prepares for no particular

industry, it gives boys a command of their hands as well as of their minds, and is essential to a full training of the faculties. It engenders not only a respect for, but a keen interest in, manual employment, with the result that many boys enter constructive trades and become successful who would otherwise have missed their way in some clerical or professional employment for which they were less fitted."

Yes, the industrial world and our American youth are both indebted to manual training to an extent that can never be computed.

The subject always illustrates, wherever it is introduced, the truth that children will gladly take the education that connects them with the outside world. The interest that the pupils display in the work is one of the striking facts. A story such as this may be paralleled all over the country. In a certain high school the boys of the first and second years were required to join the manual training classes, but those of the two upper classes were permitted to volunteer. Much to the surprise of the teachers, every boy in the school announced his desire to take the new course, and before many weeks had elapsed the senior boys, conscious that their time was limited to the few weeks of school left before graduation, formed a special class to take lessons after school hours, and on Saturdays, thus giving the strongest evidence of their appreciation of the chance afforded them of getting even a brief course of manual training.

When there is a general demand from the pupils in

every high school to come afternoons and Saturdays to study grammar it should be promptly reported.

One of the developments of manual training is the wonderful fact that the academic work of the course is better done. This is incontestable. This fact has impressed foreign observers.

Joseph R. Heape, Vice Chairman of the Education Committee and Chairman of the Technical School, Sub-Committee, Rochdale, England, says: "The principals are most emphatic in expressing their belief in the educational value of the work, stating that the boys learn such subjects as geometry and algebra much better from realizing their value and importance, and that in general they easily 'forge ahead' of other boys. The boys are all very keen at their work, and it is constantly urged that if in the workshops one secures keenness and persistence of method, these qualities do not stop in the shop, but are carried into all the other work of the school." The simple secret is that manual training arouses a vital interest in the mind of the child, and this awakening stimulates his interest in every essential department of his life. It arouses and vitalizes his mind.

Dr. Franz Kupers, Director of the "Fortbildungsschule," Cologne, Germany, remarks that "Pupils who show little inclination or desire for theoretical learning can, through manual training, become interested, properly employed, and gradually won over to other branches of instruction." The reason is simply that it gives rest and reaction from continuous application to

book study, relieves the tension, and returns the boy to his other tasks quickened and refreshed in body and mind.

Manual training appeals to a class of young men who do not care for literary work and intend to leave school. Every high school has many such pupils. Dr. Duncker, from whom I have already quoted, says of these pupils: "They are not mentally defective, but their strength lies somewhere else. Schools with a one-sided course of study cannot satisfy them or give them the training they require. Such pupils become discouraged and dissatisfied. They make the task of the teacher extraordinarily difficult; they retard the progress of the other pupils. They drag themselves from room to room, and leave the school as soon as the law permits. If they succeed in life, they do so, not because of the training they received at school, but in spite of it. The manual training high school seeks to lead these young men to mental life through the shop."

Comparatively few boys and girls are really book-minded, yet until recently all pupils were tested in book learning only.

In the school shop, problems must be met. The slipshod answer, the inarticulate answer, the evasion of answering at all, these are impossible in the shop. The materials with which the pupil deals are wood and metal, not words. The problem must be faced and overcome, and the work must show accuracy. This is a training in realities and tends to honesty.

Manual training furnishes one of the best possible

means of physical training. Pupils suffering from nervousness in the practice school and the training class have overcome their nervousness to a great degree by taking this course.

These arguments place manual training on a firm basis. It is not a luxury. It yields rich returns in practical scholarship. It forms sensible views of life in the minds of pupils. Mr. Heape, already quoted, speaking on this subject in his report to the Mosely Commission, says: "For one thing, most boys have never had the opportunity of using their hands at school and realize the charm of making things; and, for another, the work of a craftsman is looked upon as inferior to that of a clerk. Both these points should be met, and the boys of an industrial nation should certainly come into contact with manipulative and constructive handwork during their school life."

Dr. Alvin Pabst, of Leipsic, says what every one knows is true, and enforces the principle for which I have contended. "The severest criticism to which the school of the present day subjects itself is that it has seats for book learning, but no tables and benches for the manifold activities with which the children should be occupied. Mere book learning is the more injurious the sooner it begins, for the less is the brain developed, and the greater the injury done the child through one-sided mental work. A natural, rational system of education must begin by making the children familiar with the things in the exterior world, so that these may be

practically conceived in their relation to man. Therefore, the school education that is based upon the study of books only must be replaced by one which advocates practical instruction."

But what about industrial education? Is it to be welcomed? Most assuredly. Perhaps we were not ready for industrial education when the call came in 1880. But compliance with the demand cannot be refused now. Every postponement will spell industrial decadence and financial calamity for our nation.

But will industrial education displace manual training? Only in part. Industrial training is specific and not general as in the case of manual training. It is not general education. It is the training for a vocation. But manual training will fulfill all the purposes for which it is intended for those to whom industrial training does not apply or applies to a limited extent. The advantages that have been set forth apply not only to those who have decided to enter the industrial world, but also to all who are going to enter the world at all. But especially does this subject come to the aid of the average student in causing his views of the life he is about to enter to take shape.

The following figures are the result of an investigation that was made in an American city some time ago. It looked to the ascertaining of the intentions of the pupils of the high school on graduation. There were 348 replies. Among the facts revealed were the following: Percent of pupils intending to go to college, 14; per-

cent of pupils intending to teach, 7; percent of pupils who have chosen a business other than teaching, 10.

The small proportion of pupils who have a definite idea as to what they are going to do in life is very striking. The inference would be that our system of education does not tend in such a direction as to suggest to the students the appropriate lines of development.

If the inference is correct, our system of education is not a very sensible one when only 31 per cent of the pupils have a clear idea in regard to the work they intend to do after leaving school.

CHAPTER VI

INDUSTRIAL EDUCATION

It seems a very reasonable claim that education ought to fit a child to do what he must do in after life. It is clearly wrong to limit this preparation to making a living; there is more in life than mere existence and maintaining the existence. But it is clearly madness to deny that the making of a living is one of the very important ends of education. And the term living ought in all fairness to mean just as good a living as a man can make.

Let us then make this broad and simple classification of the ends of education; (1) those which relate to making the child self-supporting, and (2) those which look to his culture, happiness, power, and character. If we really tried to make this classification in practice, we would find it very difficult, for the same subject in the course of study may accomplish both ends and may even accomplish one end while being used to achieve the other. Thus, the study of German may be undertaken merely for its culture result, but the knowledge of the language may be invaluable in business and the study by which the knowledge is attained may prove an admirable discipline in preparing for the conflict of wits in after life.

Now when we accept the "bread-and-butter" theory

as one of the theories of education, and I do not see how we can avoid accepting it, we run up against the term "vocational education," which is now in the air. By this term we understand an education that is directly and specifically intended to fit a child to get a living, or rather, to do the things that belong to his life work. In passing, it must be ever kept in mind that much in education that is not called vocational tends to the end to which vocational education directly looks. John Stuart Mill, for example, said: "Education makes a man a more intelligent shoemaker, if that be his occupation, but not by teaching him how to make shoes; it does so by the mental exercise it gives, and the habit it impresses."

In commenting on this quotation, Mr. George H. Martin, when secretary of the Massachusetts State Board of Education, said: "John Stuart Mill's shoemaker, having been taught somehow to make shoes, was to be made an intelligent shoemaker by education. But supposing he had never been taught to make shoes, what would his education have done for him? It might have made him an intelligent man, but he would not have been a shoemaker at all, and then where would his living come from?"

Vocational education is not a new thing even among us. We have already carried some branches of it to a high degree of perfection. Our state normal schools are vocational institutions. They are founded and supported not to educate in a general sense, but to fit young

men and women to become teachers; that is to say, to prepare for a single branch of industry. Our theological, medical, and legal schools are purely vocational; they exist simply and solely to prepare for their respective callings, the ministry, medicine, and law. The commercial department of our high schools is a vocational department. It is established to prepare students for mercantile life. And our sewing courses in our own public schools are vocational and nothing else. They aim to prepare our girls to do one part of the work which will fall to their lot as home-makers. One of the most touching and practical vocational ventures of which I have recently heard, is the formation of classes of young women in high schools for the study of baby hygiene. All that relates to an infant's comfort and health is practically taught, the baby, for example, being actually washed in the presence of the class. This is vocational in a high sense.

When the term industrial education is used, we are merely applying to the mechanical industries the vocational principles with which, as I have shown, we are so familiar. Now if the school may teach sewing, cooking, and other domestic activities to girls, and prepare boys and girls both to be bookkeepers and stenographers, and if the state may support institutions to prepare teachers, why may not the state take upon itself the preparation of boys for other employments? Why not for the machine shops, for example? It seems as if there could be but one answer to this question. But

is it the duty of the state to do it? Is it the duty of the state to do any of the vocational work which it is doing, the normal, the commercial, the domestic?

There is but one adequate justification of the state in doing anything that it does in education. That justification is the state's own interests. The state does not educate the boy because it loves him; it educates him because it does not dare to have him uneducated. At the beginning it must educate as a matter of self-preservation. Once in the business it must extend the field and manifold the functions of education as it sees that education makes possible the enrichment and perfection of that life which education was originally intended merely to preserve. The man who pays his tax for the education of a neighbor's child does so, not because he loves his neighbor or his child, but because the education of the children of all his neighbors is necessary to a state of society in which his own interests find their highest protection and development.

Applying this principle to the subject in hand, the state prepares teachers because the purposes of education are frustrated by untrained teachers. It prepares stenographers because the commercial world must have them; men cannot write their own letters now, and their clerks cannot take them down or write them fast enough in long hand. We have reached a new era in mercantile life. In the field of industrial education the expression of the public views comes with emphasis and in very clear and ringing terms.

Associations of manufacturers have expressed themselves repeatedly and forcibly. The National Society for the Promotion of Industrial Education is composed largely of the great capitalists and manufacturers of the country. Theodore Roosevelt has declared industrial education to be the most important problem of the public schools.

No educational movement at the present moment is attracting so much attention as that in favor of industrial education. It is an old movement in Germany, and in that country industrial education has practically taken a permanent form, or rather forms, for it is expressed in a variety of schools. In our own country there have been for a long time scattering industrial institutions like the Lowell Textile School, but Industrial Education as a movement has gained headway only within recent years.

Massachusetts and Wisconsin have led in the movement, but the whole country is awake. Massachusetts created a state commission several years ago to make propaganda, to advise with school boards, and to supervise the equipment, buildings, employment of teachers, and adoption of courses of study. The report of this commission created a stir in public sentiment, and while the immediate practical outcome was incommensurate with the effort put forth, the agitation of the subject received an impetus that has awakened public interest in the subject throughout the whole of America.

The reason for this great awakening is simple enough.

The thinking people of the United States have become convinced that industrial education is the open road to industrial supremacy, and that to neglect it means that we must take a subordinate place. I quote from the United States Deputy Consul Meyer of Chemnitz, Germany, in the consular reports for 1905 (special consular report 33).

“In a comparatively short time Germany has become one of the great workshops of the world, and has secured a place in the front rank of manufacturing nations with but little assistance from nature and in the face of many difficulties. It is not a rich country; its natural resources are moderate; its position is disadvantageous for trading; it has enjoyed peace for only thirty years; it has never enjoyed security, and tranquillity has been purchased at the cost of an immense military advantage. Then, its people are not particularly inventive and have not fashioned for themselves superior weapons in the shape of new mechanical appliances and revolutionizing processes, like the earlier inventions of England and the later ones of America. And yet Germany has advanced from comparatively small beginnings so rapidly that she now does what no other country, though possessing superior advantages and fewer difficulties, can do; she successfully challenges England in nearly all the great branches of industry in which England is or was stronger. Germany is an all-round competitor and our most formidable one. And not only ours; she competes with other countries in the products in which they are strongest, with the United States in electrical machinery

and small machine tools, with France in dress materials, as she does with England in ship building and large machinery."

Without undervaluing culture and without neglecting it in the schools, it is clear that in addition to learning from books the schools must furnish training in vocational work as a true preparation for life. Why is the solution not as simple as in the case of the commercial high school or the normal school?

"‘I want to leave school and get a job.’ The usual answer is, ‘Get an education first — before it’s too late. You can get a job later.’ Now is that true? Can the average ‘graduate’ readily ‘get a job later,’ in competition with the fellow who left school young — and hustled?"

I have quoted from David Stone Wheeler. This is the argument from the boy’s side. Do the interests of the boy and the interests of the business world coincide or even harmonize? That is the crux of the whole question. I think the American public is at the present moment divided into three camps. First, the pronounced advocates of industrial education. Second, the conservatives who view the movement with distrust and believe that the boy is to be sacrificed to the ambition of the manufacturer. Third, the uncertain people, the people who are puzzled and who are trying to make up their minds. This class comprises not only the weak and vacillating, but also the thoughtful who hesitate because they see too clearly both sides of the question.

The objections to the industrial education movement are these: 1. There is no popular demand for it; the demand is confined to the manufacturers and is a selfish demand. 2. The industrial education movement is founded on a principle abhorrent to the American mind, the principle of caste, 3. It deprives the child of his right to a broad general education, substituting trade training for the culture necessary to the proper enjoyment of life. 4. It is impossible to teach all the trades at public expense. 5. All industrial education is very expensive.

Let us look closely at these objections. A discussion of them is the best way to discover what is really proposed by the industrial education movement. Sooner or later every one will be called upon to make a decision on the many questions which the movement raises.

It is true that there is no clearly defined opinion on the part of the public on the subject of vocational instruction. A great many people have never heard of the subject. Another great section never demand anything; these people are contented with things just as they are. Another section has a vague notion that something of the kind is necessary but have no notion what should be done. The comprehension of industrial needs is limited to a small body of educators, a considerable body of manufacturers, a few educated laymen, and some of the trades unions. It is the intelligence and earnestness of these forces that is pressing the subject on public attention.

But it does not follow that there is not an undercurrent of feeling extremely vague, and doubtless mistaken on one

or more points, that merely awaits direction to become an intense and intelligent factor in the question. This feeling at present, in its crudest expression, expends itself in dissatisfaction with the schools as a whole. People may not know the remedy — it is doubtful if any one does — but they may easily unite on a remedy, and it may easily be the wrong remedy. This is a dangerous state of things.

For example: no one can be insensible to the fact that children leave school with great rapidity. In Albany, New York, for instance, only 35 per cent of the pupils who enter at the first grade remain to graduate from the grammar school. In Springfield, Massachusetts, the per cent is 30, and only 88 per cent of those who entered the first grade eventually entered the senior year of the high school. Whether the average man has at his command such figures or not, the general fact is before him. He cannot explain it, but he is uneasy. Some of us who think we can explain it have the feeling that this uneasiness is pointing ominously in the right direction.

It is clear to a great many persons that the wages their children are able to earn as a result of their schooling are pitifully small, and this fact is also tolerably clear to the parties getting the small wages. In contrast to these are the wages received by the more favored young men in professional and skilled mechanical employments. "Too many American boys and girls," says Superintendent Gibson, of Georgia, "have been slipping through the meshes of the elementary schools and going out to join

the vast army of bread-winners without adequate training. Many of those who leave the schools have a feeling, based upon observation of their bread-winning friends, that the preparation they are receiving in the schools does not give them earning power." "Sixty-eight per cent, as a result of one investigation of over five thousand cases, drift into the ranks of unskilled labor; that is, in department and other stores, as messengers, errand boys in offices, and in factories and shops employing hands of a grade known as unskilled labor."

A significant statement made by Charles H. Morse, formerly secretary of the Massachusetts Industrial Commission, illustrates the way in which this undefined consciousness sometimes finds expression. He says: "As head of the Manual Training School in Cambridge, I saw it grow from 120 pupils to over 500. I know that a very large percentage of those boys entered the school because their parents believed that the school was going to teach them a trade; that is, those parents wanted the boys to have that opportunity. We would start with more than 100 in the entering class and the class in the senior year would be reduced to less than 50. Those boys dropped out of the school because the school was not giving them what they thought they wanted. They would beg and their parents would plead for the privilege of more work in the shops and they would petition to be excused from a purely culture subject which they seemed totally unable to handle because they had no interest in it."

This indicates not a popular demand for industrial education, but a state of mind which cannot be ignored. Let us bear in mind that among the causes for the evils which the people believe to exist is the very one that is the stock in trade of the industrial training advocate. It is not the only cause, as some of these advocates would have us think. The common apathy of our pupils is due to the fact that they see nothing in the education we offer. It does not touch their lives or make a vital appeal to their interest. This apathy leads directly to leaving school. Arouse the boy's interest and he is willing to stay. Manual training has clearly proven this. Supervisor Murray of Springfield, Massachusetts, says: "We are asked, 'How do you know that the boys will stay in school if they are given vocational work?' Of course, we do not know that they all will. We have had experience enough, however, with what little has been done with manual training to prove that there is a large number of these pupils who are held in school and their interest aroused through this kind of work. Any live manual training teacher can cite cases without number where manual training has been practically the only thing in the curriculum in which boys have been interested, and I have had many boys tell me that they would stay in school longer if they had more work with their hands."

The story of industrial education in Germany is really a story of evolution. Industrial education did not flame up there in a few brief years as we are given to thinking.

The story in Germany dates away back into the eighteenth century. There was a slow process of growth which was finally halted by the wars of that nation. When in 1871, after the unification of Germany, industrial education was preached and the rapid progress began, the seed fell on a soil long in process of preparation. Not only are these conditions not paralleled in this country but the tendency has been along other lines. Vocational training will probably not be added to American education. It will grow out of it.

“Not how to get — not how to spend — a dollar, but how to get — and how to spend — a life.” In this epigrammatic sentence David Stone Wheeler, without especially intending to do so, puts the substance of the conflict between vocational education and its opponents. The arguments of the orators on either side are earnest and often brilliant, but the progress of the campaign is slow. It is strange that the most striking facts make so little impression. The industrial education advocate presents the brilliant material achievements in Europe as a result of industrial training on the one hand, and on the other, the clearly demonstrated facts that our schools do not provide directly to meet the demands of business life, and that thousands of children are leaving our schools without finishing the course. Children are withdrawn from school and put to work on earnings whose scantiness breeds discontent in the presence of the fact of better wages for more highly favored youth. This is not by any means a demand, only a vague

impression, but this impression seeks definition, and when clearly defined, will become an imperious demand in comparison with which the present demand of the manufacturer and educator is a feeble matter.

In an address made by Charles H. Morse to the department of superintendence, National Educational Association, meeting at Washington, occurs this statement: "The industrial school should be conducted more as a manufacturing business would be conducted. The boys and girls in the school should be given to understand that time is money. These schools, instead of trying to give something which has only cultural value — educational value as it has been understood to be — should try to give all the subjects taught because of their practical value."

In commenting on Secretary Morse's paper Mr. Dodd, of the North Bennett Street Industrial School, Boston, said: "No child of grammar school age is sufficiently developed physically or mentally to lay aside a broadening course and to elect work that trains in specific operations. Any scheme advocating such practice would be wholly un-American and would tend to even greater class distinctions than are found in Europe."

The phrase "class distinctions" touches the sensitive point and expresses a deeply rooted horror of the American parent. It is the genesis of the hidden force whose character I am trying to develop.

Commissioner Snedden of Massachusetts in a recent address presented a scheme for the modification of the

grammar school course, whose general features are in the main approved by a considerable body of advanced educators. The plan provides for a moderate amount of flexibility in the last two grades of the elementary school. This flexibility may be brought about by requiring all the pupils in common to take the work in English, history and civics, geography and hygiene, with perhaps a limited amount of attention given to music, manual training, etc. In addition, every pupil should elect one of four groups of supplemental studies: (*a*) for those probably taking a high school course, fitting for college, a foreign language and the beginnings of algebra and geometry; (*b*) for those probably going early into industry or industrial schools, a course rich in manual training, drawing, applied science, and mathematics; (*c*) for those probably going into commercial callings, commercial arithmetic, commercial geography, bookkeeping, and other practical studies of this type; (*d*) for girls looking forward to home work, a course rich in household arts and related sciences.

It ought to be noted that such a scheme in its essential features is not new, and that it did not grow out of the vocational need. As Commissioner Snedden himself says: "The recognition of the principle of flexibility in these grades is simply a logical result of movements which have been at work in our educational system for generations. The multiplication of knowledge and the increasing consideration for differences in children make it an apparent necessity in the college and secondary

school. There are too many studies; important studies like foreign language and science find no place, many of the subjects are now treated superficially, many of the subjects are too difficult for the pupils."

The opponent of industrial education or the doubter has clearly defined objections. With the general public they are feelings, undefined although real, and, at present, effective as a retarding influence.

The parent is not willing at the eighth grade to say finally that his boy shall be a mechanic, much less any special variety of mechanic. If he places his child in the industrial class, he thinks he must bid good-by to any advancement for the child in some other line in which he might have done better. He cannot bear the thought of settling his boy's destiny so early. The American idea is equal opportunity. By his own act he limits the child's opportunities. The educator who sympathizes with him says outright that no classification should prevent the pupil from changing his course at any time and pursuing any line of education to the limit. Down below the surface lies that idea expressed by the hated word "caste."

Again, the parent knows that even if he would, he cannot yet decide for the boy what he will do in life.

As for the child himself, the value of his choice of an occupation in the seventh grade is rather amusingly stated by Miss Langley of the University of Chicago: "Even if voluntary, early vocational selection is not to be trusted. It is liable to be whimsical, uncertain, determined by

temporary influences. If the kind of occupation fervently chosen by every boy of ten were to reach mature realization, the army and the navy, the police force and the livery business would be steadily overcrowded." She adds: "Vocational selection, if imposed upon the child while still in the grades, is likely to be a disastrous mistake. No teacher, no parent even, holds the divining rod whereby may be discovered the secret springs of a child's best future activity. By all means give every child a chance at a trade, but first give him the opportunity of being a developed individual."

Right or wrong, she states the expressed or unexpressed feeling of many a parent and the positive opinion of many an educator. And this view she holds while emphasizing the necessity of trade schools.

I have tried to state with fairness this opposing view or feeling. But an impartial statement must not leave out the rejoinder. We have not disposed of the fact that great numbers of children are leaving school all the time, thus, as Commissioner Snedden puts it, "actually making a choice of vocation." And we must add, that in many cases they are making a very bad choice. The assumption is that industrial education would keep these children in school and provide for them what they want. This assumption yet awaits proof.

Out of this confusing maze we shall ultimately emerge on the truth. A few points stand out clearly and are not seriously contested. First, that industrial education in some form is imperatively needed by the American nation ;

second, that our schools are not holding their pupils; third, that the public is discontented with the output of our schools; fourth, that the courses of study must come nearer to practical life; fifth, that the suggestion of caste will not be accepted by the American parent.

What is the solution of the problem?

Every subject in education bristles with difficult questions. The thoughtful educator must acknowledge that he lives in the midst of perplexity. Many times he must ask "What is truth?"

Superintendent Gibson of Georgia writes: "Recent investigations conducted by the educational department of the international committee of the Young Men's Christian Association demonstrated that of thirteen million young men in the United States between the ages of twenty-one and thirty-five, only five per cent received in connection with their school education any preparation for their several occupations. It was also discovered that of every one hundred graduates of our elementary schools, only eight obtained their livelihood by means of the professions and commercial business, while the remaining ninety-two supported themselves and their families by the skill of their hands.

"Add to these graduates the large number of those who fall out of the elementary schools from the fourth grade on, and we have a vast army of young people going into the bread-winning occupations with no specific training therefor."

This seems to constitute an unanswerable demand for

industrial education. But on the other hand, let me quote from a recent scholarly address of Dr. C. H. Henderson, author of the popular book "Education and the Larger Life."

"Industry has perfected its measures, processes, and relatively it has done tremendous work in cheapening production, in magnifying production, in giving us almost a surfeit of things. To work these machines and to carry out these processes, industry must have some sort of a human attendant to do that part which cannot be relegated to machinery. Industry does not ask for educated persons, but when it makes its bald and characteristic statement, it asks purely for people who can carry out its processes. If you have a heart and eyes you know very well that the human side of this tremendous industrial development is very little looked after. I think that we need no education to know that the homes of the workers are not beautiful; that the majority of them are not happy, and that only a few of them are healthy. I say that primarily it is not concerned with persons, but with things; with their movement; with their production, their distribution, and it ignores the human side of life to a very large and lamentable degree."

These extracts give the substance of my discussion of the opposing views on the question of industrial education. The following are suggestions which seem to me to be fair to the pupil and practicable as well as practical.

There is much education that may be given from the very beginning, to relate the pupil to the affairs of actual life. I have tried to show how academic is our elementary education. Some of it must be academic, but why not also infuse the course of study with the spirit of the real work-a-day world? It is a very interesting world. I hesitate to argue or even illustrate this proposition because I have done so before, but one or two illustrations may not be superfluous.

They were digging trenches and laying a water pipe near the Prattville school. In one or two of the classes, this matter was investigated, not by reading to the pupils on the subject, but by sending them out to get information for themselves. Questions of a practical nature were given to the pupils to be solved and reported upon by the pupils. The following are illustrations of some of these questions:—

In which direction of the street does the water flow? Where does the pipe discharge? Which way does the pipe into which it discharges run? How wide is the pipe? How much water flows through the pipe in an hour? How much water is needed in the city every day? How much is wasted? Where does the water come from? Where is the reservoir? What are the usual sources of water supply? etc.

If such questions as these are answered by pupils who have found out for themselves, it is evident that physics, geography, government, etc., become real.

In many cities the pupils visit car shops, factories,

telephone offices, etc. If the work is wisely handled after such visits, the pupils have come out of the academic and into the real. Any one can suggest the multitude of practical questions that such a visit could occasion.

In arithmetic, nature study, reading, history, the development of this realistic method is limitless when once we have caught the idea.

Charles H. Morse thus emphasized this view of the matter: "I would have the child at that age study, in connection with other subjects, the manufacturing establishments of the community. He should know their business organization and general methods of management, their history, the sources of the raw materials used, the geography of the regions from which the raw materials come, the transportation facilities, and, in a general way, the various processes of manufacture. The market, the finished product should be studied; also the special qualifications required of the employees, the wages for beginners, the average increase of wages, and the possibilities for advancement for an earnest, intelligent worker, as well as the hours of work and the steadiness of employment for each industry."

Mr. Murray, Supervisor of Manual Training in Springfield, says: "A complete system of industrial education requires constructive work in the primary grades, not less than two hours a week in the grammar grades for all pupils, special extra classes for those boys who have not progressed far enough in the grades so that they would get the more formal work with tools, and special

classes which will allow those boys who desire it to do from two to five hours more work a week. This should enable pupils to decide whether they wish to go through the technical high school which will lead to the higher technical schools and the engineering professions, or whether they wish to enter the vocational schools which will lead directly to the trades. Trade teaching should be only a part of a complete system of industrial education, and manual training is as essential to it as it is to the system of general education."

If a boy who has learned the essential elements of a trade does not in the end decide to follow it, he is none the worse off. Indeed, he is better off. No one who has learned a trade ever regrets it. The chance of a broader education, however, should always be open to a boy.

It is quite conceivable that an opportunity may be offered to pupils or their parents to elect an industrial class, and to plan the instruction in such a way that the pupil or his parent may change his mind without prejudice to the pupil at any time. Such an opportunity is actually offered, experimentally, in Boston. William Leavitt, Assistant Director of Manual Training in Boston, says:—

"Beginning with Grade VI, the children have a chance to elect (or their parents to elect for them) admission to the industrial class. In this industrial class, five hours, at least, should be given to manual training — the time to be taken from drawing, physical training, and arithmetic. The work done in these classes, and the conditions under which it is done, conform as closely as

possible to actual industrial work in real life. The product should be not only useful, but should be put to use, preferably by the city. The articles made should be those that may be produced in quantities. The methods should be practical, and both product and method should be subjected to the same commercial tests, as far as possible, as apply in actual industry. What is it hoped to accomplish? To turn the attention of the children to things industrial; to give them an appreciation of values — the value of materials, of time, and of modern industrial methods; to prolong the school life of the pupils while enhancing their chances for industrial success."

There is a class of boys in the elementary schools who have progressed in the regular school work just as far as they will go. With them it may be simply a question of leaving school. To offer to such boys a factory school course is not to doom them to a low station in life, but to open up the possibility of a higher station than they could obtain if they followed their own callow judgment in leaving school. It would be a hasty judgment to assume that such boys belong mentally to the poorer grade of pupils. It is unsafe to conclude anything concerning a boy's ability because he does not take kindly to books. Such boys may, without prejudice to their rights, be directed toward the schools in the factories or the industrial training schools in which their productive, constructive, and achieving tendencies may be developed. The culture of these powers will mean much more in most cases than the mere storing of their minds with

book knowledge, both for the individuals themselves and for their country.

There is a class who have no choice whatever in the matter. Whether they desire to do so or not, they must leave school at an early age, and they often know it in advance. This class is frequently forgotten in the discussions. Here the alternative offered is to allow the pupil to disappear and to be lost in the ranks of the unskilled or poorly paid workers or to be given a start in some direction that will enable him to find work at a living wage. By giving such a child a vocational training we are not preventing the child from doing something that might be better for him; on the contrary, we are preventing him from doing something that is surely worse.

If the vocational flavor has thus permeated the elementary school, the pupil is likely to arrive at the high school somewhat prepared to choose. Here, it must be borne in mind, students are already actually choosing. They choose a commercial, a technical, a college course, or they choose a special institution, such as the Agricultural College. To choose an industrial course, or a course in domestic science, is only carrying the present freedom of choice a little farther. The final choice for life is not made here, but it is a very serious choice.

It would seem that the Industrial high school must of necessity soon take its place along with the commercial and agricultural schools. In these schools must be introduced, says Mr. Barney of the Hebrew Technical

Institute, New York: "Thorough practical courses in industrial and technical work, which courses shall include not only the use and manipulation of tools, but shall combine therewith those subjects which will lead to an industrial intelligence, a knowledge of materials and the principles of mechanics, of the cost of production and the commercial value of time."

To this summary I would add Mr. Martin's demand: "In order that the student may become a useful citizen as well as a skilled workman, the school course should include history, economics, and civics. Time also should be provided for thorough physical training, including personal hygiene and organized athletics. English should be cultivated through the course by composition and forensics. Opportunity should be offered to those students who might find relaxation and æsthetic pleasure in the study and practice of vocal and instrumental music.

"Otherwise," he says, "this whole work would be destructive of the most cherished American ideals, if, while teaching young men how to get a better living, the schools failed to teach them how to live a better life."

As to the financial value to the students of an industrial course such as that offered in the Hebrew Technical Institute, I quote Mr. Barney again: "The average age at graduation is seventeen years and three months. Seventy-five per cent are following mechanical lines of work corresponding to those taught them at the Institute. The average earnings vary from \$8 a week

for those graduated a year ago to \$50 a week for the older classes graduated twenty years ago, the average increase being \$2 per week for each year that the boy is out of the school."

The financial problem for the community is the difficult consideration, and demands careful deliberation before a community embarks on the venture. The per capita cost in the school from which we have taken the above figures has varied during the past five years from \$105 to \$113 as schools usually reckon the per capita cost, or from \$120 to \$125, including every expense.

I desire to emphasize the proposition that vocational education must be an important element in the education of all our youth, no matter what they are going to do. To know the real world is absolutely necessary to a well-balanced mind. And what way so excellent to know the world as to engage to some extent in what the world does?

CHAPTER VII

NATURE STUDY

AT a meeting of the School Board in an American city a number of years ago, a member suddenly arose and made the following address. "Mr. Chairman: I hear that there is a study taught in our schools called nature study. Now I think that subject is no good and I move that it be abolished." His motion did not prevail, but it received two or three votes for which he had probably provided. Fortunately the board had a member who was able to demolish his proposition.

The interesting part of the incident was the calm assurance of the member. He had made no investigation, he had not consulted the superintendent, but he had pronounced the subject "no good," and he was quite sure that it must appear in that light to anybody. It was obviously "no good."

Now this man was not a bad man, but he is a type of a class of people who hold views regarding education which they are pleased to designate as "practical." It is a type that sees in any effort by study and research to discover the value of an educational proposition, an evidence of impracticability, and labels the person who would thus seek to arrive at truth a theorist or a visionary. But on the other hand, to be very positive on a

proposition to which you have given no study, is being "practical." Education, religion, and politics are the favorite stamping grounds of these "practical" men, but there is no other department of human work in regard to which men will express such positive opinions without any logical basis and without any consideration, as education. When you pass into the realm of money making, where financial loss rewards the man who does not carefully study his business, the value of such practical men diminishes. We find the practical man in business, of course, but he corresponds very closely to the so-called theorist in education. He is the man who has a reason. It is strange how many hard, practical realities like the telephone are the concrete expression of theories.

Ex-Superintendent Seaver of Boston referred, in one of his reports, to teachers who say that time taken for nature study is time that belongs to the "regular studies." His comment is graphic. "Two ideas in this quotation are significant of the whole educational philosophy of these teachers" (and I add, and laymen); "certain studies are regular (essential is sometimes used), and the time belongs to the studies. The picture presented is that of an elevated platform built of planks, labeled fractions, interest, complex sentences, adverbial phrases, spelling, capitals, geographical facts, historical facts, physiological facts, musical intervals, etc. On this platform stands the teacher, striving with might and main to pull up to it and place upon it, in good standing position, heads erect, eyes forward and hands by the

side, as many children as possible. A few children are there with both feet. Many are clinging to the edge, and, with the teacher's help, struggling for a place. Many more have given up the struggle in despair, and are lying helpless at the foot. Some have only sat and stared."

Thoughtful teachers have long been searching for a theory to account for a lamentable and incontestable fact, the apathy of the average pupil. The theory in this case is that he seeks the activity of the world, and the school does not relate him closely to that world. This is only one of several coördinate theories, but it is sufficient to account for a great deal. If one accepts the above theory he will find that it rules out subjects and methods in the school work which the man who made the motion in my story considers self-evidently correct, and it sanctions subjects and methods which he must describe as frills. So that, when it is said that the newer additions to the course of study crowd out some of the other subjects, one of the answers is, that some of them ought to be crowded out. A course in frills would be an interesting field for consideration.

Nature study is a fair type of newer studies based, let us say, on theory. I want to illuminate that theory. The fundamental theory has been indicated. The study brings the child into close touch with life, awakens his interest, and thus arouses him to an active attitude toward all learning that is also related to life. That is the theory. But let us go into details.

Froebel, the apostle of childhood (not merely of the kindergarten), says, the business of the child is "collecting material." Let me quote some of his pictures of childhood. They are very beautiful and very true to life.

"Behold the child laboriously stooping and slowly going forward on the ground, under the eaves of the roof. The force of the rain has washed out of the sand small, smooth, bright pebbles, and the ever-observing child gathers them as building stones, as it were, as material for future building. And is he wrong? Does not the child in truth collect material for his future life-building?"

"To climb a new tree means to the boy the discovery of a new world. The outlook from above shows everything so different from the ordinary cramped and distorted side view. How clear and distinct everything lies beneath him! Could we but recall the feelings that filled our hearts and souls in boyhood, when the narrow limits of our surroundings sank before our extended view!

"An indefinable longing urges him to seek the things of Nature, the hidden objects, plants and flowers, etc., in Nature; for a constant presentiment assures him that the things that satisfy the longing of the heart cannot be found on the surface; out of the depth and darkness they must be brought forth."

Any one who has examined the contents of a boy's pocket does not need to be told that the boy is "collecting material." To some of us this material is trash. To the boy, every piece of string, pebble, bit of glass, or dead

mouse is the concrete expression of a story. Every bit of trash has an interpretation which the boy either has or seeks. If the teacher or parent can give this interpretation, the restless activity of the child continues undiminished. To the end he is an inquirer. If we fail to give the interpretation, the activity fades and the child soon inquires no more. He ceases to ask questions. Can a sadder condition of things be conceived? Inconsiderate and impatient parents often help to destroy the investigating spirit of the child by saying, "Oh, do stop bothering me with your questions." How are we going to educate a child who does not care?

Froebel tells the story thus: "The boy seeks from adults the confirmation of his inner, spiritual anticipations, and justly so, from an intuitive sense of what the elder ought to be, from respect for the elder. If he fails to find it, a double effect follows, — a loss of respect for the elder and a recoil of the original inner anticipation."

Note the word "interpretation." The whole of education is bound up in the word. When we educate a boy we seek to help him to interpret the things he sees and the thoughts he thinks. And education is dead or living as we fail or succeed in keeping alive the desire for interpretation; not mere facts but the meaning of these facts, and above all their meaning to him. Interpretation of himself and his surroundings is the meaning of play, of story telling, of research. But to interpret he must see accurately, compare carefully, reason logically,

picture graphically. Nature study furnishes the opportunity for this practice. But note that the training of these faculties is of the utmost value in all education. It is of the last importance that this training should be applied to arithmetic, chemistry, or language. The trained mind brings to the work of the school the power gained from all sources, perhaps in the fields. Surely this matter that we are now considering is very practical.

But alas ! when we enter the actual field of education it is not to be assumed because nature study should do this, that it is doing it. As in many another field of education, teachers have sadly mistaken its purpose and the subject is yet in a state of flux. They have tried to teach facts without their reaction and have even gone so far as to teach science. They have succeeded in destroying the child's interest in nature by cramming him with the facts of nature, and thus have made of no effect the argument in favor of nature study and have rejected its beneficent mission. Here again our courses of study have followed our own notions and not those of the children. It is the old story. There are, for example, three indications (not inclusive) as to a rational course of nature study: (a) children love life; (b) children love beauty; (c) children observe in an objective way. These principles would rule out many courses of nature study. They would rule out minerals until the student had passed the age of boyhood. They would rule out for a long time a stuffed owl; a live cat is better. They would rule out pistils and

stamens, scientifically considered. They would rule out, for a long while at least, a very analytical observation.

In a word, nature study is not science and does not resemble it. It takes the facts on which science is based and treats them from a child's standpoint.

The absence of the rural environment is æsthetically and morally a sad fact in the city boy's development. Whatever leads him to the study of nature measurably supplies this lack, but it must be the study of nature and not of books about nature. We cannot teach science to the children; we have not the time, the field is too broad, the pupils have not, and cannot acquire in childhood, habits of scientific thought, and the teachers have not the scientific preparation for the teaching, even if all else were favorable. To attempt it will result in the memorizing of a larger or smaller mass of undigested and indigestible facts.

It is hard to fully convince ourselves of the truth that the function of this branch of study is not to store the mind with facts. I have witnessed recitations in which, in spite of the enthusiasm and laborious preparation of the teacher, the results were very unsatisfactory. The pupils were not stimulated to a closer observation of nature and not to a perceptible extent to a greater interest in nature.

In another class a more agreeable picture was presented. My notes on the lesson read as follows: —

“The development lesson of the tadpole to the frog was rather remarkable. The children were full of life,

answered promptly, and showed great discernment and perceptive power. The lesson was well managed, the pupils being continually thrown back on what they had themselves observed. The lesson called in many collateral subjects where the main subject admitted of this treatment. Thus the strong hind legs suggested the kangaroo; the eyes, the cats and owls, etc. The subject was also applied to a language lesson."

There are two other considerations of more than passing interest which apply to this subject, to which I must refer even in a discussion necessarily as restricted as this. One is the development of the appreciation of beauty. "Beauty," said Plato, "is the splendor of truth." Sidney Lanier said, "There is not only a 'beauty of holiness,' there is also a holiness of beauty." And Froebel said, "A keen, critical eye can discern in the work of art the artist's powers of thought and feeling, as well as their state of cultivation;" thus, too, the creative spirit of God may be discerned in Nature, in his work.

In a word, a sense of beauty is an aid to the living of a good life and leads indeed to a knowledge of God himself.

The other consideration is akin to this. Nature leads man to God not only because of its beauty but because of its unity. "For," says Froebel, "the boy of this age, who has been led naturally, however feebly and unconsciously, seeks, in fact, only the unity that unites all things, the absolute living Unity, the source of all

things, — God; not a god made and fashioned by human wit, but He who is ever near the heart and mind, near the living spirit, and who therefore may be known in spirit and in truth, and who alone can be thus approached.”

In a Scotch home the good man was sick. The doctor on leaving one evening impressed upon his wife that she was to give her husband every hour just so much of the powder as would go on a sixpence. The next day he found the man much worse. Had she given only the amount of powder that would go on a sixpence? “Yes,” the good wife answered, “but I had no sixpence, and I had five pennies and two hapennies and I put the powder on those.”

Education is not a matter of quantity.

CHAPTER VIII

PLAY

“IF children were compelled to submit to the conditions and processes of most schools during the whole of their waking hours for the first twenty years of their lives, their physical, mental, and moral development would be stunted. The race has been saved by the shortness of the school hours and the persistent recuperative elasticity of the individuality of childhood.”

I offer the above startling quotation from James L. Hughes, Inspector of Public Schools, Toronto, Canada.¹ It is rather startling to be told that our vaunted system of education if pushed to the limit would “stunt physical, moral, and mental development,” and that we are saved only because there is an antidote. I quote Inspector Hughes again:—

“The child of the fourth generation brought up in a large city is a pathetic study. He is one of the saddest sights in the world, because he is almost without the instinct of play. Slavery left behind it the evidence of its terrible nature in a race of children who do not know how to play, from whom the tendency to play has been almost

¹ It is a unique coincidence that in this chapter—the last writing of Mr. Gregory—he should have quoted so much from the man who was to have the honour of preparing his work for publication.—EDITOR.

eliminated. Rev. William Gillies, the veteran educator of Jamaica, reports that 'one of the greatest difficulties to be overcome in the physical, intellectual, and moral evolution of the negro race in Jamaica is the fact that the children have lost the play spirit.'"

The thought may cross a layman's mind that the school is not the place for play. The fact is, even we teachers do not grasp its significance in education as we shall in the future. Perhaps an extreme picture may help us to catch a glimpse of the truth. What sort of a man would that child grow up to be who had never played at all, who had never even learned to play?

Here are certain phenomena. 1. Many children in our city do not know how to play, scarcely know the first element of play. The play instinct has been crushed out by poverty, by a heritage of oppression, by too early responsibility. 2. With most children in crowded city life many plays are impossible. The streets do not permit the freedom which many games require; the concomitants of brick walls and hard pavements forbid unrestrained play. 3. Under the best conditions there are many plays which children do not know. Such plays are often of a highly educational character.

Here are the results. I name them in their order as they concern our work in the schoolroom, and from the bottom up.

1. Absence of joy. 2. Listlessness and apathy. 3. Absence of ambition. 4. Absence of self-activity. 5. Lack of the very elements on which interest is based, in

the school subjects presented for their consideration.

6. Feeble social instinct such as should lead to helpfulness, kindness. 7. Excessive self-importance.

No one who has seen a dead reading lesson and has looked into the expressionless faces of the children, and listened to their meaningless reading, can fail to come to the very obvious conclusion that something is the matter. There may be various causes, but one of these often is that there is nothing in the child's mind with which the ideas of the reading book may be connected. But as reading books deal with childish ideas, the cause we have thus suggested must be translated thus: the class before us is not composed of real children. And this may easily be the case.

Froebel divides human life into infancy, childhood, boyhood, youth, and manhood. Let us accept this classification as sufficiently accurate, and then let us accept also his solemn dictum that no one can be what one stage demands without having lived through the preceding stages.

I quote the great educator's exact language: "The boy has not become a boy, nor has a youth become a youth, by reaching a certain age, but only by having lived through childhood, and further on, through boyhood, true to the requirements of his mind, his feelings and his body; similarly, adult man has not become an adult man by reaching a certain age, but only by faithfully satisfying the requirements of his childhood, boyhood, and youth. The child, the boy, the man, indeed, should know no other endeavor but to be at

every stage of development wholly what this stage calls for. Then will each successive stage spring like a new shoot from a healthy bud; and, at each successive stage, he will with the same endeavor again accomplish the requirements of this stage: for only the adequate development of man at each preceding stage can affect and bring about adequate development at each succeeding later stage." In other words, if our children have not had a childhood, we must give them one.

Now let us look this proposition fairly in the face. Many children never have a real childhood, and many others a very incomplete and inadequate childhood.

It is well to pause at this point and ask ourselves the question. "Is it really true that man must not only live through, but experience, all the natural periods of life to become a perfect adult?" I recall a delightful lecture on "Old Age" by my friend, Professor Starbuck, of the University of Iowa. In it was this statement: "To have a green old age one must have had a happy childhood." Is this true? If the baby did not fondle her mother, if the little girl did not play with dolls, if the little boy did not run and jump extravagantly, if the high school boy never played ball, would the resultant man or woman be just as good a product? Who believes that he or she would?

But granting the necessity, is school the place for play, especially for organized play?

Now let us remember there are certain things that all children do (the exceptions are insignificant), they talk,

sing, draw, love animals, love beauty, play. This is not a complete inventory, but it will do. Let us assume that these activities are God's will concerning the child. Let us assume also that they are His indications as to the child's culture as truly as the fact that cranberries grow in a bog is His indication as to the cultivation of that fruit. We admit the talking, and we embody language in our curriculum. Following the above indications, we enter music, drawing, nature study, and art in the same curriculum. But what about play? Will the child do as well by himself? No one who knows children will grant this. He may fail to learn to play, or he may play very unintelligently or within narrow limits, or he may play immorally. And in any case the long train of blessings which follow in the train of organized, directed play will be lost. And let it be remembered that organization and direction need in no way interfere with spontaneity in play. The opposite is pure assumption.

But what are these blessings?

1. Play is the first self-occupation of the child, and therefore it is the awakening of his individuality. The failure of our American schools to evoke individuality invites a serious and just criticism. We cannot ignore any agency that develops initiative. Play is the truest form of child self-activity. All that he does in play is done in response to his own desire.

2. Play is peculiarly the child's mode of self-expression. Here, at least, he acts with freedom. Thereby he comes to know himself and we come to know him.

“Freedom is characteristic of the lives of birds and animals, and of primitive man. It is the very lifeblood of play.” With this comes a sense of power, a priceless possession but one often missing in the child’s character. And to this must be added faith in one’s self. “Step by step,” says Hughes, “a boy can measure his progress among his fellows and relatively compare his strength of to-day with his weakness of last year, and at each step in advance there comes into his life a consciousness of new power.”

3. Hughes says, “The boy is filled with a passionate desire to modify the conditions of things. Unfortunately, most of us lose this aggressive attitude, which is the foundation of all progress, as we grow older, and passively accept conventional conditions as we find them. Play with material things is the highest possible means for making an original and intelligent worker.”

4. Play is the child’s work. It is not true that love of play destroys love of work. The very opposite is true. Any one who enters a classroom and sees a class settle down to work after a game must give up such a notion. The qualities that enter into earnest play are the same as those that enter into earnest work. By wise manipulation these qualities may be transferred to work, and this is actually accomplished by many a teacher.

The qualities just alluded to constitute some of the blessings of play. Let us enumerate them : habit of attention, power in competition, self-control, energy of character, courage, enthusiasm, independence.

5. One of the most important results in play is what is called motor training. The term means a very simple thing. The motor nerves run from the brain to various parts of the body, and through them the brain issues its commands. If another person commands, the brain receives the command and transmits it through the motor nerves to the proper activities. But the brain may issue its own commands. There are two classes of people in the world: those who think and act for themselves, and those who act for others. And the teachers of the world fall into two classes, depending on which product they turn out. The critics say that the bulk of our product is composed of those who do not think for themselves.

But in a game the boy who cannot think for himself is lost. He must make a multitude of decisions, make them quickly, and if he hesitates or errs, it makes no difference, he must suffer. His brain must act with celerity and his body must respond instantaneously and accurately. "No other process," says Hughes, "so completely develops the mastery of the mind over the body and so fully trains the body to respond perfectly to the mind as a good game."

6. Respect for law and a comprehension of one's relation to his fellows constitute another outcome. In play the boy is among his equals and there is no other course than to respect the rules of the game. Plato said: "If children are trained to submit to laws in their plays, the love for law enters their souls with the music accompany-

ing their games, never leaves them, and helps them in their development."

But more than this, the boy is a member of a community, a free individual, but bound by obligations. He has his own part to play in the game, and he must play that part with all his skill or the team loses. This is a training in a very simple principle underlying the constitution of society, a principle that every citizen must respect.

7. Play has another relation to law, of a very important character. It prevents lawlessness by providing an outlet for the superfluous energy of the child. Many a teacher has failed to recognize this elementary principle. If she provides a way for the stored-up energy to expend itself, it will not expend itself in disorder. But in some way it must find an outlet. A game discharges the overcharged battery and equilibrium is restored. Mr. Hughes put it very truly, "A playing school is easily controlled."

8. Play is a moral force. Of course "play as a form of social conduct is either moral or immoral, just as life itself or any other social action is." But under social direction play always tends to be a moral force. The considerations I have already adduced indicate that, and in addition, "play can never be maintained for long or on a high level except under conditions of friendliness. Any expression of dishonesty or selfishness tends to chill the social atmosphere and makes the game flag. Play is preëminently social." Froebel considered play a kind of religious exercise for children.

9. One of the important outcomes in play is joy. Froebel says it is "the sense of sure and reliable power, the sense of its increase both as an individual and as a member of the group, that fills the boy with all-pervading, jubilant joy during these games." Happiness is not merely a desirable condition for children; it is the basis of their best work, of their highest activity. It stimulates both body and mind. Its absence means apathy, heaviness.

10. Finally, I quote once more from my friend Mr. Hughes. "The weakening self-consciousness of childhood, the most restrictive influence in a child's life, is overcome by social intercourse on the playground under the stimulating conditions of coöperative effort to achieve success." I think it is very easy to miss this significance of the catalogue of the blessings of play which I have offered in this and in my preceding article. The conclusion to be arrived at is not that play is a pleasant recreation of childhood for which we ought to make suitable provision, but that it is an essential feature in the child's growth toward manhood. It cannot be left out without great loss to development, not to the child merely, but to the resultant man or woman. We adults look on play from our own standpoint, that is to say, from the point of view of what it means to us, — recreation; but that is a misleading view. The *Springfield Republican* puts it thus: "Play is the serious work of the child's life, and forms the foundation of his future character growth and very existence. Nature, realizing its importance, clothed it in attractive garb, instilled the instinct

for its indulgence in various advanced forms during the different stages of the child's growth, and, following naturally ordained lines, there is produced the man or woman designed for, and capable of carrying on, their work in the progress of the world. Without knowing it, the amused child may be taught to develop self-control, to love and adhere to law and duty, to be generous to his fellow-playmates; in a word, the playground child becomes a good and desirable citizen without perceiving the process. If 'the child without a playground is father to the man without a job,' and 'the man without a job is father to the man without a country,' the status of the city which fails to supply to its growing citizens an adequate number of playtime spaces is easily fixed."

A study of the conditions of childhood, especially in the less favored portions of our community, but really in all classes, convinced me long ago that the great enemy of the teacher is the apathy of school children. If a child's mind is asleep in the classroom, if he will not wake up and seize the privileges offered, it is idle to offer the privileges. Under such conditions the teacher may go through the motions of teaching, but education is at a standstill. In some cases, in view of the unfortunate previous history and present environment, the passive, listless attitude of the children gives one the impression of hopelessness.

With this state of things in view I inaugurated, several years ago, experiments in organized play in the school buildings to rouse children to an interest in themselves

and the world around them. The children of the primary departments of several schools were to be brought together regularly and in groups, for games in each school. They were also, as far as possible, to be taken out on walks to parks and shops to awaken their interest in a new world. This was the experimental stage.

In one school, through the months of December, January, February, March, and part of April, the hall was in almost constant use for three days each week. Two classes—(100 pupils)—occupied the hall at a time. The classes were grouped by related grades so that the social side, or spirit of entertaining, might be introduced to this class of pupils who so need it.

Pupils were first taught to form a circle without assistance. Songs were sung, and exercises given to music. The exercises were to teach grace, concentration, and application, as no verbal directions were given. These exercises were greatly enjoyed by all classes. Next came complete relaxation and rest, after which came directed activity in ball or bean-bag games of various kinds. Then, for a moment or two came another rest period, after which plays selected by the children were used. Every class marched by twos and fours, and the older ones by eights. I believe in a great deal of music, and in the absence of the nervous haste that is common among this class of people.

In another school, although the time taken for play was entirely outside of school time, yet the average attendance was thirty-seven out of a class of forty-eight. The

number never fell below thirty. They played catch with bean bags and balls, ring bean bag, drop the bean bag, squirrel, bounce ball, birds in the nest, pigeon house, bull in the ring, going to Paris, London Bridge, "In and out the windows," "Five little chicadees," and "As I was going down the street." They practiced marching.

As a result, I think we demonstrated the truth of two propositions: first, that children need a childhood in order that they may be educated; second, that the childhood may be measurably supplied when it is lacking. The experiment was a success. The children learned how to play, and many of them did not know how to play before. The expression and manner of the children brightened conspicuously. The effect was seen in their daily work, and in the course of a couple of years there seemed to come an entire change of attitude on the part of the children toward their work. They seemed to show the real characteristics, the instincts and loves of childhood.

Finally, the introduction of dramatic representation into the reading lessons of the pupils always results in a great love for this kind of play. It is very simple. The story of the lesson, or any other story, is acted by the pupils in groups very much after the manner of the old-fashioned dialogue, but with much more action and almost no formality. It is practically play. The piece is not rehearsed to make it a show piece. Its educative possibilities are exhausted and a new one takes its place. Dramatic reading and dramatic action are an application

of the self-activity of the child to expression. The basal conception of their work is that the child shall look upon expression from the point of view of the first person rather than of the third, and the difficult thing in teaching is to get him to look at his studies from the standpoint of the first person.

In all this, which takes but little time, there is an appeal to the principles that underlie the play instinct. I think that few teachers will claim that the five minutes thus expended would be better expended on arithmetic. On the contrary, a five-minute game and a twenty-five minute exercise in arithmetic are worth more in the interest of arithmetic than a thirty-minute arithmetic exercise without the game.

Groos says, "Animals do not play because they are young, but rather have a period of infancy in order that they may play." This is even more true of children. If the school should be an institution for the development of the child's power — not merely for knowledge storing — it cannot fully achieve its purpose without providing the best possible opportunities for play.

CHAPTER IX

POPULAR CRITICISMS OF SCHOOLS

THERE are at least three broad criticisms made by the public on our schools. By our schools I mean the schools of the United States. First: "There are too many things taught, and the essentials, so called, are slighted." Second: "The teaching does not meet the needs of the times, and especially tends to a want of respect for labor." Third: "The class of young people turned out are not a practical, efficient class; they are wanting in gumption, have little application and sense of responsibility."

These are only the criticisms from the lay public outside of the ranks of educators. From within those ranks come the same criticisms in a modified form, and a host of others of which the public knows nothing. These criticisms are very interesting. It would be just as foolish to deny them entirely as to admit them entirely. Let us look at them:

First: "The schools teach too many things and the essentials are slighted." There is one curious and rather amusing assumption that looms up at the outset when we examine this criticism at short range. It is assumed as a fact that does not need proof that formerly the essentials were taught well or at least better than they are now.

Formerly, we drilled on these essentials and of course we had success; nowadays we have the child studying so much that, of course, the essentials must be neglected.

This is the statement of the critics. Now the principal trouble with this statement is that "it isn't so." We did dwell on the essentials in the good old days; but we got no better, but rather worse, results than we get now. To support this proposition we do not have to rely on the untrustworthy and often partial memories of the people who make this claim. Fortunately, written results of former days are still accessible and are easily examined. Let us look at some of them. They are instructive and entertaining.

One of the most interesting and recent discussions of the "three R's" appeared in a little pamphlet reprinted mostly from the *Springfield Republican* in 1905, entitled, "The Springfield Tests."

In 1890 there were discovered in the attic of the high school building in Springfield, Massachusetts, several old sets of examination papers that had been written in the fall of 1846. These papers consisted of printed questions in geography and arithmetic, with answers written on the printed sheets, and written tests in spelling and penmanship. Mr. Parish, the second principal of the Springfield High School, gave these examinations to his pupils. They were placed in the hands of Superintendent Balliet of Springfield and preserved by him in his safe.

Two of these tests, spelling and arithmetic, were

given to about two hundred and fifty ninth-grade pupils of the local schools of Springfield in March, 1905, and the results were carefully compared with the results of the tests of 1846. The children of five schools took part in the examination. The papers were sent to the directing principal and he examined and marked, according to a uniform standard, the papers of the new and the old tests.

The following are the results :

Spelling :	1846	1905
Number of pupils who took tests,	85	245
Average per cent correct,	40.6	51.2
Arithmetic :		
Number of pupils who took test,	79	245
Average per cent correct,	29.4	65.5

Of the class of 1846, only sixteen of the eighty-five pupils stood as high as 70 per cent in this spelling test, the present "passing" mark in most schools. Three pupils had no words spelled correctly ; nine had only one right ; while twenty-four, or more than one fourth of the entire class, misspelled seventeen or more words.

The word heiress was spelled in the following ways by the pupils of 1846, — heirress, hurriss, heirruis, heirees, heirness, hioress, heress, hirresa, hereis, airress, airess, airest, airresst, airhess, arress, arris, arriss, ariest, areress, arerest, eirress.

A little geography spelling is also interesting ; Agasta, Bristle, Suffork, Midlesex, Esexx, Berkshiere, Eirie, Ontareio, Mane, Vamont, Rodiland, Connetticut, Corne-dicut, Newjessy, Pencilvany, Mishegan, Mysurie, Misury.

In arithmetic I select the first two examples. 1. Add together the following numbers: Three thousand and nine, twenty-nine, one, three hundred and one, sixty-one, sixteen, seven hundred, two, nine thousand, nineteen and a half, one and a half. 2. Multiply 10,008 by 8009.

Mr. Riley (principal Central Street Grammar School, Springfield), who conducted the examination and wrote the pamphlet, says with absolute truth that the above examples, requiring only abstract number work, are of the kind in which the "schools of our fathers" are supposed to have given that incessant drill in which the modern school is said to be lacking; but only 44 per cent of the class had the first example correct, and even in the second, where the only chance for a mistake was in the actual multiplying, 37 per cent, or more than one third of the class, were wrong. Again in the fifth, another abstract example, "What is one third of $175\frac{1}{2}$?" for which the drill method should have prepared the pupils, only 36 per cent of the class had the answer correct. The answers to this example varied from $5\frac{1}{3}$ to 6312.

The eighth example was: "What is the simple interest of \$1200 for 12 y., 11 m., 29 d.?" There are twenty-seven incorrect answers recorded, varying from \$93.28 to 11038980000, whatever the last number may mean. The comparison of the papers in geography and penmanship is equally to the credit of the Springfield pupils of 1905.

It must be clearly borne in mind, of course, that my contention at the present time is not that our arith-

metic and spelling are good enough, but that they have not suffered by the "enrichment of the course of study," to use the recognized form of description. I hope to show that they ought to have gained by virtue of this very enrichment. It is only too true that these essential studies are in many places in our country not what they should be. The causes are very interesting, and it ought not to be hard to remove them. But the treatment is not quite so simple as some of the critics of the public school hastily assume.

Mr. George H. Martin, secretary of the Massachusetts State Board of Education, writes in his report of 1905-1906: "Many people imagine a golden age somewhere in the past when everybody habitually spelled correctly." He might have added, a critic remarks, "When everybody ciphered accurately and read fluently."

This criticism does serious harm to education by alienating public sympathy, and in some places even causing the withholding of proper material support for the schools.

In my library is an interesting little book, which bears the rather alarming title, "Artificial Production of Stupidity in Schools." It was written forty years ago and appeared in England in the *Journal of Psychology*. It was a serious attempt to explain the reasons for the failure of the schools to develop intelligence. It claims that stupidity is a universal fact. At present I desire merely to refer briefly to the statements in the volume as to the condition of education in England forty

years ago. They read wonderfully like the criticisms of the present day.

The author says very seriously, but with an ironical flavor, "With the exception of being, perhaps, able to read with labor, and to write with difficulty, the pupils must not be expected, six months after leaving school, to possess any trace of their 'education' beyond an invigorated sensorium and a stunted intelligence."

The writer of the book from which I have been quoting, quotes her Majesty's Inspector, Rev. W. J. Kennedy, as follows: "I think there is truth in the statement that those who leave our national schools deteriorate intellectually rather than improve."

Again: "Upon testing the educational customs of the present day by even the most elementary principles of psychology, it becomes apparent that a large number of children receive precisely the kind of training that has been bestowed upon a learned pig." He subsequently explains what he means by the above statement: As educated pigs nod their heads, or stand on their hind feet in response to certain noises, so children make correct answers without comprehending the meaning of the answer or of the question. As an illustration he quotes Rev. Mr. Brookfield, another Inspector. Mr. Brookfield states in his official report for 1855-1856 that he called upon two children, aged about 11 years, "who did their arithmetic and reading tolerably well, who wrote something pretty legible, intelligible, and sensible about an omnibus and a steamboat," to write down the answers

of the Church catechism to two questions. It must be observed that they had been accustomed to repeat the Catechism during half an hour of each day, in day school and in Sunday school, for four or five years, and the following is what one wrote :

“My dooty tords my Nabers to love him as thysel and to do to all men as I wed thou shall do and to me to love onner and suke my farther and mother to onner and to bay the queen and all that are pet in a forty under her to smit myself to all my goones teaches sportial pastures and marsters to oughten mysilf lordly and every to all my betters to hut no body by would or deed to be trew in jest in all deelins to beer no malis no ated in your arts to keep my ands from pecking and steel my turn from evil speak and lawing and slanders not to civet desar othermans good but to lern laber trewly to get my own leaving and to do my dooty in that state if life and to each it his please god to call men.” The answer of the other boy is similar but I cannot spare the space for it.

I must limit myself to one more group of testimony bearing on the alleged superiority of the methods of teaching in the past. This time I choose a period slightly nearer to our own than in the preceding two cases. A committee of the Norfolk County Massachusetts Committees' Association was appointed at the fall meeting in 1878, for the purpose of examining the children throughout the county who had been four years, and those who had been eight years, in school.

Mr. George A. Walton, agent of the Massachusetts State Board of Education, was invited by the committee to act for them, and detailed by the State Board for the purpose. He prepared for the test with the greatest care, and presented the results with skill. The general plan of the examination was approved by several persons of experience, to whom it was referred before being applied in the schools. The examinations lasted about six months. The results of his task were published in 1880 in a report of 128 pages. It attracted wide attention.

The number of pupils in the primary grade examined was 2866; in the grammar grade, 2095; total, 4961. The ages in the former case varied from $8\frac{1}{2}$ to $10\frac{1}{2}$; in the latter, from $12\frac{1}{2}$ to $15\frac{1}{2}$. The number of towns examined was 24.

From the summary of percentages I present the following figures. I confine myself to the grammar pupils. Considering arithmetic, the average per cent in column addition for the entire county was 65.7. Ten towns of the 24 fell below 60 per cent. The example demanded was the addition in column of eleven items, each containing three orders of units. (Time allowed was five minutes.) There is not a good modern class anywhere of the given grade but would be ashamed of such a result, even if the time were reduced to two minutes.

In multiplication and division the average of the county was 68.8. In simple interest the average was 42.9 per cent. Nineteen towns out of 24 were below 60 per cent.

In the example, the principal consisted of dollars (four places), the time from August 20 to December 5 of the same year, the rate 8 or 9 per cent; the interest being required.

The percentages in written expression, penmanship, capitals, and punctuation and spelling were respectively 64, 52, 49, and 62. In written expression only three towns were above 70 (a low passing mark); in penmanship, one; in capitals and punctuation, one; in spelling, five.

So much for figures. The observations of Mr. Walton on the results are far more interesting. He speaks in the most guarded and considerate way, but it is evident that he believed the showing as a whole to be something very bad.

Mr. Walton's statement that the ability to express thoughts upon paper is an important practical end to be aimed at in the schools, is a very modest one; but throughout the test, he says: "Very many of both grades gave evidence that they had never been taught even the mechanical part of any composition exercise; their spelling was poor, capitals were wholly wanting, and no punctuation was attempted; there was no idea of the arrangement of parts of the letter or of the narrative. The pupils of some schools, after the materials were placed in their hands and the directions were given, sat in apparent amazement, as if the most unreasonable demand had been made upon them. To some, indeed, the directions were at first incomprehensible and had to be many times repeated. Again, among the papers

taken in the upper grade, there are many in which the pupils show a clear appreciation of the story, and good judgment in seizing upon and arranging the important incidents of the narrative; and yet the style is poor, the expressions are ungrammatical, the writing is cramped, and all that relates, to the mechanical execution shows faulty or neglected early training."

The following, taken from the samples of work presented in Mr. Walton's report, may illustrate his strictures. There are many such given.

"Cyphus the Prince of Persia he and another boy went out to walk he had a long coat on which was too big for him the other boy had a coat which was too small for him and only came down to his middle, and he wanted the little boy to let him take his coat (and the big boy) would let him take his little coat so Cyphus father came and said why would you not let him take the big coat and he would take the little coat so he went home and he become a prince."

The spelling of three selected words by children from $8\frac{1}{2}$ to $10\frac{1}{2}$ years of age pans out thus: "which," 69; "whose," 54; "scholar," 44.8. "Whose" was spelled in 108 ways, "which" in 54, and "scholar" in 221.

In the matter of reading, the report states that: "In the larger number of primary schools, the teachers seem to regard the expression of thought as not within the province of the young pupil; there were many pupils in both grades, but particularly in the primary, who called off the words in a droning and monotonous way, or shouted

them out one after the other with as little regard to the thought as if they had been the columns of a spelling book." Mr. Walton says: "So far as I could discover, with rare exceptions, little attention is given to what the children read, or to reading for the acquisition of knowledge, if we leave out of account the text of books committed to memory for recitation. The time of reading in both grades seems to be mostly occupied in teaching to call the word properly, without reference to the amount or kind of knowledge the pupil is to acquire."

As to penmanship, the report says: "The writing in many schools is limited to what is done in the copybooks; the copy at the top of the page is written again and again, sometimes with a wider departure from the original at each repetition. No attention is given to the movement of the hand or arm, or to the forms; and very rarely, so far as I could discover, are the muscles trained to make movements with rapidity. This, I incline to think, is a universal failure in the schools."

Finally, as to arithmetic, note the following statement: "To one who has not been used to seeing similar results elsewhere, the failure in the simple operations is perhaps the most surprising thing in the examination. There were but nine items given for addition in the primary, and but eleven in the grammar grade, with a total average of 56 per cent. Why should not 80 or 90 per cent of all the answers be correct?"

Mr. Walton indicates that the state of things in Norfolk County was a general state of things elsewhere,

and not in the least surprising. These pupils ought to have done better, but he would have been surprised if they had. Now all who knew Mr. Walton knew that he was a wise, considerate man, with advanced ideals. His discussions in the report I am considering read like prophecy. They embody many principles which modern pedagogy has since adopted. He knew his ground, and his statement is worth taking.

As to the amount of work done in the schools, Mr. Walton found that many of the pupils had really made little advancement. "The pupils of the grammar grades were far apart in respect to the work attempted, some who had been eight years in school having advanced but little beyond the fundamental operations, while others had only reached fractional numbers, and yet others had gone through the arithmetic required for admission to the high school. In a few cases the tests for the primary grade, with the example in division or with a simple example in fractions, were submitted to the grammar grade, and found to be fully up to their attainments."

Perhaps the most significant and amusing fact in connection with this report is that it alarmed the country at large. A suspicion haunted most superintendents that if their work had been thus remorselessly examined, it would have come out little better. Unconsciously, they felt that it was a portrait of the general state of education at the time, a revelation of what could be found anywhere for the trying.

I have not ventured to go so far back as Horace Mann. The picture he draws of the condition of things in 1838 is very dark. His picture of Massachusetts education at that time is appalling.

A rejoinder may be offered: What proof have we that the present is better? That is a fair question, but it is not the present question, which is this: Were not former days better? The answer is emphatically: No. The system of to-day is immeasurably ahead of the school system of the past. The growth has been steady. Whatever may be said against the "enrichment" of the course of study, its "frills and fads," the contention that the essentials, so-called, have suffered in comparison with the past, falls flat. It does not follow that these essentials are taught as well as they should be yet. Perhaps they should have advanced more; perhaps they would have advanced more but for the "frills and fads" afore-said. This is an open question. But no argument to that effect can be based on the superiority of the schools of the past. That is not an open question.

In the matter of the "three r's," granting that the past has no superiority over the present, the objector who still claims that the essentials are not properly considered has a right to press his objection. These essentials may indeed be better taught than in the past; but are they taught well enough? And specifically, if they are not taught well enough, is the introduction of the newer studies, the so-called "frills," responsible?

To both questions the answer must be "No." The

essentials are not taught as well as they should be, but the newer studies are not responsible for that fact. Let it be borne in mind that I am speaking of the country as a whole.

But this admission regarding the teaching of the essentials must be variously construed. For in some places the teaching of the essentials leaves little to be desired, while in others the subjects are taught badly.

At the outset it is assumed that the introduction of the "extras" reduces the time to be spent on the regulars. This is only partly true. Nature study, for example, is one of these extras. Let us say that fifteen minutes a day is given to this study. But why may not the reading lesson occasionally be about nature? And again, inasmuch as we have to read about nature, if we are going to study it very much, why are we not, in so doing, improving our class in reading? Reading is the leader of the "three r's." Perfection in reading is purely a matter of practice. It makes no difference whether the child reads from a reading book or from the nature study book or a history, as long as he reads matter within his comprehension. There is no particular inspiration enveloping the reading book.

Or his nature investigations may be made the basis of his language work and of his compositions. He must write on something, and the teacher must guide him in securing this something. Why may not the something be found in nature interests, among other things?

Such correlations are entirely possible, and they are

numerous. They represent a great saving of time and they are very modern. And they represent this very important principle too: That the education of the child requires for healthy mental growth just such an interlocking of subjects.

But again, may not the new subjects have a tonic effect on the old? Is it not possible to think of the work in the old subjects as being done in shorter time and more effectively by reason of the additions to the course of study? Let us see.

First: The spirit, the attitude of the child is of the greatest importance. Stating it simply, a child who wants to know will learn far more than a child who does not want to know. Indeed, to put this proposition in a striking light, if the teacher could secure on the part of his boys as much enthusiasm in arithmetic as they show in baseball, he would accomplish wonders. But generally he cannot. His deadliest foe in the classroom is apathy, lack of interest. Now one of the facts about the modern school is that it is interesting. It owes this interest partly to a better comprehension of children, and consequently to a better selection of methods, but partly also to the fact that the course is richer and appeals to more sides of the child's nature. Because school is more interesting, because it touches life at so many points, the child is more self-active, and less forcing is necessary. In these days more than ever before the child wants to learn; and this applies to arithmetic as well as to anything else.

Music is an interesting illustration just here, and easily enforces the foregoing line of thought. For music is the prince of frills. It is charged with being the least practical of all subjects. Let argument on that assumption wait for awhile. But here let us remember this rather important fact. Just because music is in the schools, school is a happier place. Imagine its complete absence. And then remember that everybody works best when he is happiest.

Second: I quote my friend, Superintendent Riley of Holyoke, who wrote "The Springfield Tests." He says, "Few people, except educators, have considered the possibility of improving the work in any study by decreasing the time and increasing the concentration of the child and the skill of the teacher. Few people have endeavored seriously to find out to what extent such subjects as manual training and drawing, through correlation, clinch facts in arithmetic,—or how far spelling is improved by broadening the child's knowledge through a greater variety of reading matter or through such a branch as nature study."

I offer an interesting illustration. At the Hyannis, Massachusetts, Normal School, they spend not a little time in gardening, in raising eggs, and in building structures made necessary by these and other industrial activities. Now here is a serious invasion of the time sacred, say, to arithmetic. Not so; arithmetic is correlated throughout. The size of the plots affords opportunities for area calculation. The mensuration

tables come in in the lumber work ; calculations of all sorts and of the most practical kind are possible. The value of lumber, of nails, of time enters. The value of garden products, fertilizers, etc., the value of the ground itself, these are parts of the arithmetic. All banking business made necessary by the financial transactions supposed, the depositing of money, the drawing of checks, etc., is taught.

Now there is a curious fact concerning arithmetic taught in this way. It sticks. It gives arithmetical power. And it is equally curious that the examples in the arithmetic have no such sticking quality. At any rate, it takes much more time and effort to get the same result with the arithmetic textbook than it does with the lumber pile.

The special applications of the improvement in the character of the work done in the schools and of the shortening of the time necessary to get good results as a result of correlation meet us at every turn in the school course.

Third: There is a rather inviting field of discussion relating to this subject that is very little understood. Dr. Luther Gulick of New York puts the basal thought in this interesting way. He says: "If I exercise my right arm vigorously for three months, and do not exercise my left arm, I will find at the end of that time that my right arm has greatly increased in power. But I will find that my left arm has also increased in power ; not so much as the right arm, but some. The power accumulating in my right arm overflows to my left." This is an illustration of a universal law. If I exercise any faculty, I not only gain much power for that faculty, but I gain

some power for other faculties. This law, the late Frank A. Hills, secretary of the State Board of Education, calls "The Law of the Gracious Overflow." The designation is as felicitous as it is poetic.

Now to be specific. Every time I awaken in a child a real enthusiasm for music, for example, so that he is willing to work hard over it, that enthusiasm overflows to other subjects, or rather it can be manipulated so that it will overflow. If I develop an additional enthusiasm for drawing, for history, for nature study, I have similar overflows. The other studies profit, among them the "three r's." This has been the actual course of things. Many a boy has been aroused from his lethargy by awakened interest in frogs or beetles or some fact of nature. His mind has awakened, and in due time the balance of his normal interests come to life. That this has not been the process more frequently is because teachers do not know the principle. When a teacher grasps that principle, his power receives a sudden and inspiring accession.

These considerations sum up the matter. The proposition is this: So far from weakening the teaching of the old essentials, the enrichment of the course of study must, within certain limitations, bring about better results than would be possible without it. And this, I think, has been the result.

But is there any end to this enrichment? May not the process of introducing new material be continued so far that the course becomes overloaded, becomes, perhaps,

impossible? Alas, yes. And the state of things assumed in the question is sometimes a reality. But is that not what has happened to all good things? The contention that the enrichment of the course of study necessarily impairs the basal work cannot be maintained. On the other hand, I think it is clear from the foregoing argument that a reasonable and judicious enrichment must result in greatly improved work in the fundamental studies. In other words, to get the very poorest results possible in the "three r's," it is only necessary to limit the teaching to those "r's."

One query yet remains to be considered, and is respectfully offered to such parties as believe, in spite of what we have submitted, that the new subjects do overload the course. The query is this: What about the overloading under the older and more restricted courses of study? What about the greatest common divisor and the least common multiple, which everybody has studied, but which no human being ever uses or ever did use? What about allegation medial, complex fractions, duo-decimals, and a vast number of operations useful enough to a few, but of no possible value to most people. Real arithmetical power was not developed by teaching such subjects, so much time may be saved by omitting them. If real arithmetical power is developed, the individual easily learns the special arithmetic that is necessary in his particular business, so that other departments of arithmetic, such as partnership, partial payments, etc., may be omitted in school and more time may be saved for the new subjects.

CHAPTER X

MUSIC, LITERATURE, AND DRAWING AS ELEMENTS OF CHARACTER

THE last word has not been said even if we have been successful in proving that the so-called "frills" of public school instruction are not responsible for the shortcomings of the so-called essentials, or even if we could prove that the "frills" are responsible for the improvement of the essentials. There yet remains one proposition to be demonstrated, a proposition of the greatest moment.

The proposition is this: The newer subjects of the school course are of great importance in themselves; they are also "essential" subjects if any subjects are to be dignified with this term. Indeed, from some points of view they are more essential than some phases of the orthodox essentials.

Let us look for awhile at the most obviously ornamental and therefore, in the opinion of some, the least practical of the "fancy" additions to the course of study. I am speaking of music. The defense of this subject will imply the defense of a number of "unpractical" subjects.

Now music may be defended in various ways. It increases the happiness of school life. Its scientific phases involve a mental discipline not unlike that given by mathematics. The rapid reading of music requires

alertness, nice estimates of pitch and rhythm, quick decision. These are excellent qualities to go into the make-up of a child's character. Music is harmonizing, refining. Finally, music leads to several modes of making a living.

But these apologies for music do not touch the fundamental explanation of its place as an integral element of a school curriculum at public expense. This reason relates to the very foundations of the social and moral life, and therefore to the existence of society itself.

It is usually and hastily taken for granted that the exclusive business of public education is to train the child to make a living. But is this so? What about the hours of leisure? Has education anything to do with them? For the hours of leisure are the hours of temptation. In business, business necessity surrounds the employee with restrictions that measurably safeguard his honesty. But when five o'clock comes, when he lays down his pen or takes off his apron, when he becomes his own master, when he has the absolute power to do right or wrong as he pleases, then temptations come in as a flood.

He goes to his home or his boarding place, and decides on the pleasures of the evening. Now comes the important question. What preparation has been made in his school days for these hours of pleasure? His parents and the church have given him counsel, but that is not enough. Who has prepared him to prefer high pleasures to low? Who has prepared him to understand high

pleasures? Specifically, what kind of music shall he seek this evening? For music of some kind is offered on all hands. Questionable places offer music; places of unspeakable vice offer music; the church offers music; refined homes offer music; the oratorio, the symphony, the opera offer music. It is too late to make preparation now. As far as music is concerned, he will go where he can find what he can understand. If he seek the low, the pleasures that go with it will be low, the associates will be low.

Thus music vaults into a high position as the arbiter of his pleasures. It becomes a moral force of great power. It ought not to require argument to show that the pleasures of a people are an index of their character. We recall the famous saying, "If I can write the songs of a nation, I care not who makes their laws." That is a profoundly philosophical statement. Music controls emotion, and emotion controls action. One of the recent doctrines of practical psychology is the dominance of the emotions. And in education that truth means just this: It is idle to train the intellect and to leave the emotions fallow; if you fail to train the emotions, the emotional nature does not die; it simply takes on another character. And the character and intensity of our emotional nature control our living.

Of course, it is not claimed that music will save the boy. But it gives him one more chance. He will not seek the chamber concert or the oratorio or the singing social in a home of high refinement if he cannot under-

stand that music. It is true that he may not seek such music even if he can understand it, but his tendency will be to seek it. Of course many other elements of his early preparation as well as his later acquisitions and his present environment determine his choice of pleasures. But so far as music is an element in the choice it is almost certain to act in accordance with the boy's musical character, so to speak, — a character that has already been formed.

Now what is true of music is true of literature. Some one has said, "It is of doubtful advantage to teach a boy to read and not to teach him what to read." The press constantly traces crime back to habits of reading, to the "penny dreadful." Our own experience justifies the inference. But if reading may lead down, why not up? Why may not a careful training in the wise selection of books and toward the love of good books result in definite preference for the pure, the worthy, the helpful, the ennobling in literature? And if this taste keeps a young man in the house to read "Ivanhoe" rather than to go to a low musical comedy, it has helped in his salvation.

Drawing may be thought of also in the same way. It is true that drawing is to be defended also on other grounds. But its influence in training the artistic nature is essentially moral, for it tends to control the individual's pleasures. I have no time to answer the contention that high art may be impure. Ruskin has answered that. It is as clear as noonday that the

tendency at least of high art is away from the sordid, the commonplace, the degrading. It is away from the coarse, comic post card, away from the tawdry ornament, and toward the upper world, the world of beauty where one may associate with those who believe with Plato that "Beauty is the splendor of truth." For, says Sidney Lanier, "Not only is there a 'beauty of holiness,' but there is also a holiness of beauty."

But time would fail me to speak of nature study, of history, and geography, and physical culture. In each of these there is an additional reason for its presence in the school course, but there is also, and ranking very high as a reason, the fact that these studies have to do with the pleasures of life, therefore with its temptations.

Picture an extreme case: a boy who does not love music or art or literature or poetry, or little children, who are part of the poetry of life. Consider that all the avenues to his higher nature are closed up. Whence must his pleasures come? Through the avenues of sense; and therefore they must be the pleasures of sense. Is that a hopeful moral outlook? But the extreme case illustrates the law that in so far as the avenues to the higher life are closed up, those of sense must take their place. There come to us the lines from Young's "Night Thoughts," a picture of materialism.

"Sense, take the rein,
Blind Passion, drive us on,
And Ignorance befriend us on our way.
Ye last but truest patrons of our race.

So live the brute, since like the brute we die.
The sum of man, of Godlike man,
To revel and to rot."

"A man's life consisteth not in the abundance of the things that he possesseth." There is something of importance in this world besides making a living. It is living a life. And all history emphasizes the proposition that a people's vitality has a direct relation to the character of its pleasures. We cannot shut our eyes to this great sociological truth. If we do not prepare our children to choose their pleasures rightly, we shall repeat in our own history the awful, unspeakable social story, and the inglorious end of Rome and of Antioch of Syria.

CHAPTER XI

ARITHMETIC

IT is time to drop that word "essentials," as referring to any subject in the school curriculum. The term is an assumption, and I have temporarily conceded the assumption merely to put certain truths in plain light. The idea of essentials and non-essentials is a fiction, and it is time to consider this fiction from the standpoint of everyday, workaday life.

Just for a moment, let us remember that even in thinking of the workaday life, in the preparation of the boy or girl to take his part in its serious affairs, we cannot ignore the moral. For if it were possible to thoroughly evoke the moral nature, if we could make our boys true to duty, to their own responsibility, to their parents, to their neighbors, to themselves, the hardest tasks of the teacher would disappear. Teaching is difficult not merely because children cannot learn, but also because they do not desire to learn.

But, approaching the question of education fairly from the utilitarian side, let us ask a question. Why do we educate a boy at all? The answer is simple: we educate him that he may accomplish his destiny in the world; that he may do all for which his endowment fits him. But this is not the same thing as saying that we educate

him in order that he may be filled with facts. For many facts may be of no possible use to him, however much they may be of use to others; other facts, moreover, are difficult for him now, but will be easy, in a year, or two, or three. Some facts, again, are of no use to anybody. Certain facts he must have, but even these are of little value unless they enter into and become a part of his life. Facts are like food: it is not the quantity, but the assimilation, that counts. And in school, it is not the study, but its reaction upon the individual, that is of supreme importance. Let us make this proposition clear by applying it to some of the subjects in the course of study. To grasp it means a revolution in our views of education.

Let us begin with that venerable and halo-encircled "r," arithmetic. The application of the above proposition to this subject means this: It is not a matter of importance how much arithmetic a boy learns, but what sort of an arithmetician he becomes. So far as that subject is concerned, what he wants is just enough to enable him to do his work in life at his best. This includes two things: first, skill in the processes he is called upon to use, and second, arithmetical sagacity, power to understand or to learn what he does not know now and may be called upon to know in the future.

Now the number of arithmetical processes that most people are called on to perform in actual life is small. It includes the fundamental rules, a little simple work in fractions, a good acquaintance with decimals, interest with bank discount and simple percentage (not the myriad

so-called "cases" of the latter). In the case of a large number of people a much smaller capital suffices. But absolute comprehension, accuracy, and rapidity are needed within these limits. Imagine a boy who is trained in arithmetic to this extent, trained to be alert, rapid, and sure, and who in his general education outside of arithmetic, is trained also to clear thinking, to the best use of all the brains he has. Picture such a boy in actual business called upon to master partial payments, which he has never studied. What will happen? He will master it in fifteen minutes.

But the multiplication of subjects in arithmetic may prevent this outcome by so loading up the pupil and the teacher that skill and rapidity are impossible. And this is what is actually happening throughout this broad land. The arithmetic has been cut in comparison with what was required in the days of old, but we still fondly hold to many traditional subjects. I submit but two illustrations:

The teachers of former years taught and the teachers of to-day teach a subject in fractions known as the least common multiple. It takes time to teach it, it takes time to drill it, it takes time to come back to it and teach it and drill it all over again, and then — it goes into limbo. No human being uses it (in arithmetic).

"To find the principal when the rate, interest, and time are given." That is a "case" of interest. I doubt if any one who reads this article has used it twice in his life unless he is a specialist. But there are three other "cases" in interest and three in plain percentage, not to

speak of the applications of percentage to profit and loss, commission, etc. Now let us freely acknowledge that there are people who must use some of these processes. But there are also people who must know how to find the area of a circle, the volume of a sphere, the frustum of a cone, the buoyancy of a ship, the present value of a life insurance policy, etc. It is clear, that either these things must be taught somewhere or else enough skill and intelligence must be imparted to enable the student to master these himself when he needs them. Both courses must be pursued; but the special training should be confined to those who are more likely to need it.

It is clear also that, for the ordinary pupil in the public schools, the multiplication of subjects in arithmetic means decreased power through lack of adequate drill. Narrow the range of the teaching, and greater power is possible. Any one really familiar with the schools of the United States knows that the characteristics of the pupils are these: dawdling, inaccuracy, and lack of ordinary common sense in dealing with new problems. We are better than we used to be, but we are poorer than we ought to be. The trouble is not in the intrusion of the newer subjects, but in the overloading of the old.

Let me return to my basal proposition. What we want is not arithmetic, but arithmetical power. We want to confine the subject to its province. I believe that the work in our grammar schools and high schools must from a certain point divide into courses; college, business, industrial courses, etc., which will enable the student to

prepare to do the thing for which he feels fitted. Under such conditions arithmetic must be specialized as well as geography, drawing, and other subjects. What I am trying to show now is that for the given student the question is one not of amount, but of power, and power implies assimilation.

I am trying to show also that arithmetic loses its place as an essential subject. It is not essential at all, except in a limited sense, as to a limited area; and its essentiality varies with the individual. Drawing may be far more essential than arithmetic to many a pupil. Indeed, the vaunted importance of an extensive, comprehensive course in arithmetic is responsible for many of the misfits in the world. We must all have some arithmetic, but to make a child study equation of payment when his divine endowment says he should be studying birds is a crime against the child.

Is it not time that the child should be recognized as an individual? Is he not one of a kind? Did God in creating him intend him to do certain things in the world? What things? That is the solemn question the teacher must answer. He may not be able to answer it very wisely, but it is madness to ignore it; it is blasphemy to substitute his opinion for the divine opinion. And this is what we do, when we tumble fifty children into the arithmetical hopper and say that they must all come out at the bottom so much arithmetical grist of a uniform variety. No subject ever can be essential in such a sense as that.

Is there not a haunting feeling of something fundamentally wrong in our thinking as we reflect on such considerations as these? Do we not seem to be face to face with a great parting of ways? Is not the fundamental consideration the child, his personality? Is not all else to be considered in view of its reaction on this divine entity? The opposing view holds. There are subjects to be taught. The child is a convenient thing to teach them to. You cannot teach geography without children. Therefore we must have children in the schools; but the geography is the important fact, and the child must accommodate himself to it. Here is arithmetic for the child; bring forth the child, — as if we should say: here is the lemon squeezer; bring forth the lemon. Included between these two extreme views range the teachers of the country, the mass practically adhering to the latter view. Once more, let us search our practice. Let us bow to the Froebelian law of self-revelation. Let us make the child the starting point for our courses of study and our methods. When we do that, our schools will be revolutionized and the divine intention will be incarnated in our children.

CHAPTER XII

GEOGRAPHY

IN the last chapter I endeavored by the aid of arithmetic to make clear this proposition: That there are no "essential" studies, that every study is essential or not essential to the extent that it meets the child's needs in life. Stating the proposition in another and a very interesting way, the education of a child is a question in the solution of which the child comes first and the subject and books second. This statement not only changes the selection and treatment of subjects, but it revolutionizes the whole ideal of the school. It lies at the basis, for example, of industrial education. It is destined to produce a most radical and far-reaching change in the organization of the schools of our country.

Among the subjects that illustrate the contrast between the former and the newer thought in this connection the most interesting and striking is geography. This subject, while not honored with a place among the "three r's," is, nevertheless, considered by everyone a very useful branch of study. If not "essential," it is "near-" essential. But how and in what way?

Note, that it has been a favorite branch of study with only a few people. Most children in the past disliked it or had a most feeble interest in it. But, as I have tried to

show in a previous chapter, without interest, we get very small results with children. Education is a matter of self-activity. I think that the memories of geography in the case of most of us are confined to the game of Findings, generally played surreptitiously. It has left few traces on the student's mind: a limited knowledge of countries, cities, rivers, etc. (with some, a very limited knowledge), a much more trifling knowledge of customs, an inappreciable knowledge of trade, and little desire for more knowledge of any of these things. But we spent a prodigious amount of time upon it. Now here is a great expenditure to secure a very little result. That looks like a serious waste of time and money. Of course, I do not claim that nothing came of it, but that only a little came of it; that little was obtained at great cost, and the most valuable result, a love of the subject, was practically lost.

What was the purpose of geography in the earlier days? It was merely to get facts. Therefore, the books were crammed with them. We committed to memory — or we were expected to do so — the location of many cities, the windings of many rivers, the location of many a bleak cape, the boundaries of a vast number of countries and states, and productions of amazing number, variety, and distribution. Most of these have been forgotten. Here and there a fact remains in our memories, but most of us have learned more geography from the newspaper and from general reading and travel than we ever learned in school.

No other subject has been taught more poorly than geography. The chief cause of the poor teaching has been the failure to grasp the true reasons for teaching the subject at all. This really important subject has generally been regarded as a means of giving children conceptions of the relationship of land masses to the great bodies of water, and the names of the leading parts of land formations and of different bodies of water throughout the world, with, in later years, some knowledge of the political divisions of the world, and of facts relating to population, productions, etc.

There are only three reasons that can justify the teaching of any subject in school: the development of power, the culture of the mind, or the storing of the mind with knowledge that will be of use in practical life. The teaching of geography in the past has had little influence on either of these departments of training or culture. Educationally the processes of teaching geography have trained the memory slightly and by the worst possible processes for memory training, — the committing to memory of unrelated facts. Practically there was very little real value in the facts after they had been learned.

Mrs. Browning ridicules the aim of geographical teaching in her description of the teaching given to Aurora Leigh. Aurora, in describing her education, criticizes the old method of teaching geography, when she says:

"I learned the internal laws
Of the Burmese empire, — by how many feet
Mount Chimborazo outsoars Teneriffe,
What navigable river joins itself
To Lana, and what census of the year five
Was taken at Klagenfurt."

Geography should make the child acquainted with the earth as the home of man, and should give him definite knowledge regarding the various causes that influence the conditions of life in the different parts of the world. It is a degradation of this ideal to make the study of geography consist mainly of the memorization of the names of places, and of facts relating to statistics of population, etc., which change with each census. Such teaching robs geography of every vital element of interest and value. If geography really meant nothing more than this, there could be little justification for giving it a place on the school program.

The real study of geography trains the child to investigate the conditions of life, and the causes that produce varying conditions in different places. It enables him to understand why certain parts of the earth are deserts and other parts fertile, and leads him to see clearly why some districts are teeming with a vast population while other districts are not inhabited, or are occupied by a very small number of people. It makes him familiar with the development of plant and animal life, and their relationship to human life. It treats of soil and its formation, of rainfall as essential in promoting

growth, of winds as influencing rainfall, of mountains in deciding the direction of winds, of the causes that lead to varying conditions of climate, of the results of the motions of the earth, of the great ocean currents, of the wonderful work of rivers, of the various divisions of the human family and their special characteristics and powers, and of other phenomena affecting the earth as man's home.

A boy should not merely know that there is a vast desert in the northern part of Africa; he should be taught why so large a part of that continent is a desert. He should not be taught the mere facts that there are great salt lakes in the western part of Asia, in the western part of North America, and in the interior of Australia; he should learn why these lakes are salt, why in the nature of things they must be salt — because they have no outlet.

Geography should be one of the most interesting and most educative subjects on the school program, because of the variety of its departments and their direct relationship to human life, and of the fine opportunities it affords for training the reasoning powers by dealing with the real problems of everyday experience.

Why do we have day and night? Why do the days and nights change in length? Why do we have different seasons? Why is it warm in summer and cold in winter? Why is it colder on the eastern coast of North America than on the western coast? What causes winds to blow on some days and not on others? Why do not our winds blow always from the same direction? Where does

the dew come from? Why does it come in the night and not in the day? Why does it not rain every day? Why does it rain at all? Why do we not have good moonlight every night? Why is the moon not always round? Why do rivers flow where they do and not in other places? Why are cities situated where they are and not in other places? Why are mountains found where they are? Why are some mountains volcanoes? Why does the sun rise in the east? Why does the sun set in the west? Why does the sun not always rise at the same time and set at the same time? Why does the sun not always rise in the same direction and set in the same direction from your house? Why do we not see the same stars every night? Why does time change as we travel east or west? Why does it grow colder as we climb higher on a mountain? Why does it grow colder as we go farther away from the equator? Why does the sun not shine straight over the heads of people outside of the torrid zone? Why are the days and nights the same length about the 21st of March, and the 21st of September? Why are our nights longer after September, and our days longer after March? When are our nights longest, and why? When are our days longest, and why? Why do our days get shorter after June? Why do our nights get shorter after December? Why does the North Star go lower in the sky as we travel toward the equator? Why do we have eclipses of the sun? Of the moon? What is the shape of the shadow of the earth as it is seen crossing the moon? Why do we not

have two eclipses each month, one of the sun and one of the moon? Why can we not see farther on a flat country? Why can we not see farther on the ocean? Why do we see the top of a vessel when she is coming toward us before we see the hull?

These and many similar problems may be made deeply interesting to all children. Indeed, when properly planned and properly taught, there is no other subject so universally interesting as geography, because its problems are of universal meaning in the lives of all children. The solution of these problems gives the teacher his greatest opportunity to develop the reasoning powers of his children, because the problems are real problems, that they may perceive and conceive clearly. Such problems form the best possible basis for definite reasoning.

Mathematical geography, well taught, gives a better training of the logical powers than arithmetic or any department of mathematics can give, because the problems are so clearly manifest in the elements necessary as a basis for the child's reasoning.

The "Committee of Ten," appointed by the National Educational Association, reported as follows in regard to geography:

"Observation should go before all other forms of geographical study, and prepare the way for them; its object being (1) to develop the power and habit of geographic observation; (2) to give the pupils true and vivid basal ideas; and (3) to arouse a spirit of inquiry and a

thirst for geographical knowledge." Every child has naturally a spirit of inquiry, which the teacher should develop. Usually we have dwarfed or destroyed this basic wonder power in the child's mind by forcing children to study statements about facts instead of investigating the facts of life surroundings and conditions, and by compelling them to try to memorize names instead of guiding them in the study of problems that their own observation has revealed to them, so that they may learn for themselves the principles behind the phenomena with which they are already perfectly familiar. The observation so wisely recommended by the "Committee of Ten" is intended to define the relationship of conditions with which the children are already familiar, and to make them conscious of facts easily recognizable and possible of the clearest conception, so that they may be led to think definitely in regard to the causes that lie behind the phenomena of the child's relationship to the universe, and the influence of his environment to his own life. Such training does not merely develop a deeper interest in and a stronger thirst for geographical knowledge, but a deeper interest and a stronger thirst for all knowledge, a more definite reasoning power, and a greater capacity to recognize the material problems of life, and through them gradually the intellectual and spiritual problems connected with the development of humanity.

"The Committee of Ten" further says: "Observation, however, should not be confined simply to the

passive, fixed features by which pupils are surrounded. They should observe the agencies that produce surface changes, such as winds, rains, floods, cultivation, etc. The temporary streams that follow rains represent on a small scale many of the natural processes by which surface features are produced. From these immediate agencies the observations should extend to the phenomena of the weather and climate, such as temperature, winds, clouds, seasons, etc."

Pupils should be trained very early to observe the movement of the sun in rising and setting farther north or south, and in rising higher or falling lower at noon, noting the seasons at which the various changes take place. The changes in the moon, and the length of time that passes from new moon to full moon, and from full moon to new moon again, should be observed and recorded even by young children. They should also note daily the direction of the wind, and try to find out from which direction rain usually comes; and they should record as many observations as possible about the weather.

The children should be taken out to ravines and hills and ponds and the shores of lakes, where practicable, and trained to observe the effects of streams, rains, the melting of snow in the springtime, etc. They should be trained to reproduce and reveal in visible form the things that they have observed and the facts that they have learned, as far as possible. For this purpose sand tables, sand boxes, clay, putty, and other plastic substances, cardboard, colors,

drawing, and other forms of representation and construction should be used. Maps made by the pupils independently or in groups or classes to represent the vegetables of the different zones, or the animals of different countries, or the relief structure of continents, or the natural and manufactured commercial products of different countries, are much more interesting and impressive to the pupils than ordinary maps. In making such maps excellent pictures of trees, plants, animals, and men and women in their national costumes may be cut from magazines or advertisements and pasted on the maps drawn by the pupils, or the pictures may be drawn and colored by the pupils themselves. The making of such a map will make a clearer and more permanent impression on a child's memory than a hundred efforts to commit the facts to memory by ordinary processes.

Rapid map sketching from memory, locating the special features that are being studied, is the quickest and surest way of fixing geographical forms, and locations in the memory. Careful map drawing to a scale should be taught to the older pupils, but nearly all map drawing done in school should be rapid sketching from memory. A pupil who sketches the same map ten times from memory in half an hour, comparing his sketch each time with the real map to see the defects of the sketch, will have learned vastly more about the map than a pupil who has devoted the whole half hour to making one carefully drawn map.

The formation of soils by the weathering of rocks and

mountains, and by decaying animal and vegetable matter, should be explained. The children in most localities may be led to observe the formative processes of soil construction. The influence of large rivers in carrying the soil for long distances from the mountains, and in forming new lands, should be taught.

There are few places where the fundamental apperceptive centers for the true understanding of the essential principles and facts of geography, such as direction, distance, relative location, natural adaptation to man's needs and uses, difference in soils, the effects of winds and water in weathering rocks and informing new land, as well as the various forms of land and water, may not be defined clearly in the minds of pupils by actual investigation and experience. Such investigations and experiences are the true basis for real geographical teaching.

A very interesting department of geography is the study of the various races into which men are divided, and of the different types of government which they have evolved, with their religions and other elements of their varying degrees of development and civilization. These studies should be taken up in the later years of school life.

In "Hard Times" Dickens thus describes his schoolmaster: "He knew all about the watersheds of all the world (whatever they are), and all the histories of all the peoples, and all the names of all the rivers and mountains, and all the productions, manners, and customs of all the countries, and all their boundaries and bearings

on the two and thirty points of the compass." And the novelist adds: "Ah, rather overdone, M'Choakumchild. If he had only learned a little less, how infinitely better he might have been taught much more!"

This is but a slight exaggeration. The M'Choakumchilds are yet doing a good deal of teaching. One of the family taught in New Jersey at the time of the Columbian exposition at Chicago. I was one of the State committee appointed to pass upon and arrange the papers sent in for exhibition. One examination paper in geography was based on questions of which the following was one. "Name all the places in the world you know." Then followed a few pages of foolscap, the facts being arranged in a highly logical order something like this, Europe, Toms River, Sacramento, Yang-tse Kiang, Revere Beach, Germany, Connecticut River, Kamchatka, etc. I have known but one question designed to get at so much information. The single case is that of a question in history intended "to develop general information," which read thus: "Where and when did who do what?"

Note also that in all this learning but one faculty of the mind is thought of, the memory. Now let us grant the importance of the memory, and let us grant also that some movements in modern education have tended to an atrophy of that faculty, but still it is true that memory is not all there is of us, even in geography. Geography is a logical study, and should appeal to the reason, imagination, and perceptive powers of the student, as well as to the memory.

Now, whenever one uses psychological terms, he is very apt to be set down as unpractical. But consider what, in plain English, these words mean, perception, reason, imagination; and especially what they mean in the teaching of geography. They have much to do with present-day education.

Perception means simply that we shall see things, and see them well. The fact that many people go through life and see little takes the word "perception" out of the unpractical, and raises these two questions, questions decidedly practical: Is this a good thing for the boy? How did it come about?

Is it a good thing to be blind, or partially blind, or even of faulty vision? The whole question of success turns on a man's power to note every fact of importance to him, and on his power to make use of it. The tendency to observe and the power to note are aims in teaching that by no possibility can we leave out. There is no department of life in which keenness of vision is not of value. To be quick to see and to take advantage is the popular way of putting the thought.

But many children lack just this power. In plain, homely phrase, they lack gumption. They do not see, they do not care to see, they do not know what seeing is. How did it come about? Just as muscular feebleness comes about, just as lack of musical discrimination comes about, just as absence of mechanical skill comes about: by failure to recognize the power to see, and failure to develop it. And the pity of it is that the disposition to

see is the dominant characteristic of childhood. That is the child's principal business, to see and to ask questions. If we recognize this tendency and develop it, it will grow like any other tendency; if we do not develop it, it will wither, like any other tendency. Froebel, the great German apostle of education, has expressed the pathos of the situation: "Unfortunately, we see here again confirmed what to our sorrow confronts us so often in life; that even the highest and most precious blessing is lost by man if he does not know what he possesses." "By and by we would fain give another direction to the energies, desires, and instincts of the child growing into boyhood; but it is too late, for the deep meaning of child life passing into boyhood we not only failed to appreciate, but we misjudged it; we not only failed to nurse it, but we misdirected and crushed it."

The failure to develop perception runs throughout our entire school work. In geography our opportunities for its development are many. For example: Among the little children, it is possible to point to the positions of the sun during the day, to observe which way the shadow falls in the forenoon; in the afternoon; at noon; to set sticks in the yard, and notice at different hours in the day the length of shadow with regard to the stick; to actually observe natural features, such as hills, rivers, ponds. Among the older children it is possible to observe the kinds of soil from the coarsest gravel to the finest vegetable mold; to take field lessons and to see all things geographical that can be seen, ocean, shore, bay, island, hill, slope, etc.; to ob-

serve the geography of one's own city, to know of its manufactures, etc., to recognize the appearance of foreigners whom we meet, to visit ships that go to foreign countries etc. The catalogue is endless. The facts of geography receive, under such treatment, a reality that no book study can impart. If we do not do these things, if the child gets anything from a book that he can, with reasonable effort, find for himself, we throw away the precious opportunity to train the faculty of looking for and seeing things, that "indefinable longing," which, as Froebel says, "urges the boy to seek the things of nature." It is a longing easily starved.

Now note very briefly the relation of geography to the reason. Does the cultivation of the reason need defense? Is it not more important to a man that he shall make no false moves from what he calls bad judgment than that he shall know the bends in the Susquehanna River?

Why not lead the pupil to think concerning the causes of fertility? Thus, fertile soil is generally found at the lower edges, and poor soils at the upper edges of long slopes. The study of climate, for example, employs the reason very largely. Including as it does meteorology, its influence on the productions of the earth, the pursuits of men, their comforts and luxuries,—it is a fascinating study. The means that men employ to counteract the influence of climate are also interesting. And finally, the fact that climate controls production results in the conclusion that climate controls

commerce. Why not teach that the people of rich productive regions must exchange surplus products for things that they need but do not produce; that a center for collecting the surplus and sending it away must be established; that the needed products will be received at this center and then distributed locally; that a center will be established at a place where water or railway communication, or both, are available, etc.?

As for the imagination, let us call it broadly the picture-forming power. That is near enough for the present purpose. Think of St. Petersburg. What do you see? A dot on the map. Think of the city in which you live. What do you see? A city. Now much of our so-called geographical knowledge is just so many dots and lines and colors on the map, or some lines of printed matter in the text. Such knowledge is inert. It leads to nothing. But picture knowledge, the photograph on the retina of the imagination, makes foreign scenes real, and foreign people live; it awakens curiosity, excites thought, makes real the idea of trade, awakens sentiments of sympathy, humanity, fraternity, tends to destroy foolish prejudice, substitutes arbitration for war.

But to get all this the course must be lightened. The course of study cannot take in everything, and it seems a wise principle to put into the course what can be thoroughly drilled by the teacher. If this nucleus is firmly retained, the child's subsequent acquisition in geography will be easily and naturally made.

We must make the central thought in geography the

earth as the abode of man, making the interests of man the prominent interests. This would cause a treatment of countries and cities to be based on the commercial point of view, involving reasons for the existence of the cities, etc., rather than upon mere questions of location. It would make such matters outrank in importance the location of capes, bays, etc.

We must guard against the present tendency to demand of the child scientific information, physiographic or otherwise, that is beyond his comprehension. This means that physiography is to be taught, but that there is a limit to it, and that other phases of the geography have their rights.

We must keep all the time as far as possible within the sphere of the child's interests.

We must have much field work; we must make the child a discoverer. We must by supplementary books on scenes, customs, and trade make all countries real. We must closely associate the geography of a country with its history. Finally we must demand of the pupil that he think.

A large collection of pictures should be made in every school to illustrate the lesson in geography. Magazines and illustrated papers contain many pictures of cities and typical scenery, lumbering, and agriculture, commercial institutions, great factories, mining plants, rolling mills, oil derricks, and dock yards, people in their national costumes, and animal and vegetable productions. These should be cut and mounted by the pupils, and kept in classified packets for use in the geography lessons.

In all geographical teaching, the overloading of the memory with mere details of facts, or names, or data relating to population, productions, area, etc., should be avoided. The aim should be to train pupils to be interested in mankind, and in the earth as man's home and his source of subsistence, and to lead them to observe and think intelligently.

Two stories must close this chapter. The first is from a very entertaining little book written by a brilliant grammar master of Chicago, Mr. William M. Giffin, entitled "School Days of the Fifties." Would that the scene were impossible now!

"We studied 'jogafy' in the old stone schoolhouse (in New York State) too; both in the big room and the little room ask 'What is an island?' and all would yell, 'An island is a body of land surrounded by water.' Then had we been asked what is the meaning of surrounded, there would have been no yelling, as it is doubtful if any of us knew. I shall never forget the day a visitor, a teacher, by the way, up in pedagogy, as I know now, sat listening to us recite definition after definition with a smile on his face. At last the teacher asked if he would like to ask some questions. His first question was, 'Name the Middle Atlantic States.' We named them. His next, 'Who ever saw any of, or any part of the Middle Atlantic States? Hands up.' No hands. 'Well, who never saw any of the Middle Atlantic States? Hands up.' Up went all of the hands! Then, 'Does the St. Lawrence River flow up hill or down hill?' 'Up hill,'

with one voice. We knew by the way the teacher looked that something was wrong, but did not know what. We were sure we were right, because we had seen it on the map. Now came, 'Which is higher, Lake Erie or Lake Ontario?' 'Lake Ontario,' again from the whole class. Now came the last but not least, 'You may all point to the north,' and every index finger of our right hands pointed to the ceiling of the room."

The other is a Chelsea story. A wise principal and a couple of wise teachers took their classes over to visit a White Star steamer. They went by appointment, wandered all over the boat, asked questions, helped themselves to travel literature and maps of explanation published by the company, as well as time-tables. Then they came back to Chelsea. They traveled to Birmingham, London, Glasgow, etc., with the aid of guides, maps, and time-tables. The facts of interest in the guides were fascinating, the pupils were captured by the study. They did not learn all that the geography says about England, but they knew England in a sense that few pupils (or grown-ups either) know anything. That is education.

CHAPTER XIII

READING

It is high time that this discussion took into consideration the leading member of the ancient trio of "r's." Our fathers were not wrong in giving to reading this place of honor. It deserves it. It lies at the basis of all knowledge. Without it, progress in every direction is practically arrested. It is indeed true that some success is possible without this art. There are other avenues of knowledge. Worldly shrewdness, like that of our wise, lovable, and illiterate Mr. Boffin, in "Our Mutual Friend," indicates that there is a wisdom not due to reading. But it is nevertheless true that we must depend for the data on which we base much of our knowledge on our power to read the thoughts of others expressed in the printed page.

The apparent stupidity of children in much of their school work is often due to their inability to really grasp the meaning of the thing that they are reading. They are in a position similar to that in which we adults would be if we had to get all our knowledge of religion or politics from the German language, of which we had a very incomplete knowledge. Much would elude us in that case; and for the same reason much eludes the children in the reading of English.

But what is the practical purpose in the teaching of reading? Of what use to us adults is the power to read? Merely that we may quietly ascertain from the page of printed or written characters the meaning that some one has recorded in that manner. But is that the purpose in school? It would not seem so. Apparently the thing we are going to do all our lives is to read aloud, for that is what the school reading lesson generally means, and has meant from time immemorial. This seems rather amusing. For we are trying to acquire the art of doing a certain thing in the future by doing all the time the thing we are not going to do in the future. The rejoinder is simple. To learn to read to ourselves we must read aloud so that the teacher may discover that we are reading correctly. And this answer is a type of many a foolish answer that we school teachers are making to many a fair question. We answer by asserting a thing that is not so, merely because we blindly accept traditions handed down to us by teachers who, like ourselves, never questioned the tradition. The only possible way to learn whether a child understands what he has read is to ask him to tell in his own language what he has learned. Nothing is more interesting in the whole range of school administration than the fact that everywhere teachers are doing things that do not produce the results they are intended to produce, and yet they keep on doing them.

Illustrations of this strange blindness are numerous enough. The ascendancy of Latin and Greek in our

high schools for so long a time, and the earthquakes that were necessary to retire them to their proper status, furnish a striking example. But reading furnishes another illustration that our emancipation is as yet but imperfectly effected.

For it is true to a limited extent only that we learn to read to ourselves by reading aloud. Let me not be understood to underrate the importance of reading aloud. We cannot do without it; it is indispensable in gaining correct articulation, pronunciation, and expression. These functions are important, and to a limited extent reading aloud does also help in acquiring the art of reading to one's self, especially in the earlier stages. But its function in this particular is exclusively restricted. We acquire skill in reading in another way.

To demonstrate this proposition is important. It is interesting not to the teacher alone, but to the parent also. For if my contention is valid, then there is evidently a large waste of time in the teaching of reading. Putting it tersely, if we can teach a child to read in four years instead of in eight, we save four years of his reading time. And time is the most precious possession a child brings to school. Some children are limited as regards money; all children are limited as regards time. Let me then offer at this point some considerations that establish my position, and then ask, to what practical result does this proof point?

First, it is a matter of common knowledge that children who have plenty of reading at home and who

are induced by their parents to read, or who love to read themselves, soon outstrip their companions and acquire the power to read in an incredibly short space of time. The reading aloud served to start them; the rest they did themselves.

Again, it is easily proven that where an intelligent teacher is successful in putting all his children in the same relation to silent reading that holds in the favored cases cited above, a similar thing happens. The method is simple. While carrying on his regular reading lessons, he supplies his pupils with all the silent reading suitable to their years that they will take, and provides opportunities for using it. He cultivates on their part an appetite for reading. It is an appetite, by the way, that children may easily acquire. The result soon appears. The children make rapid advance, and in a year they are reading with ease matter that would otherwise be impossible.

Again, it is clearly impossible to get sufficient practice by merely reading a short paragraph. If one did only that in studying a foreign language, he would never learn it at all. Fortunately for the boy in school, even in the worst conditions, he must read silently what others are reading aloud.

The fact is that reading is simply a matter of practice. It is, however, a matter, too, of a great deal of practice if one would become proficient. I am referring to the silent act of reading, which is what ninety-nine in every one hundred understand by reading. If one would learn

German, he must be put in an atmosphere of German; he must breathe it, read it, talk it, dream it. And so must the child who is learning English.

Reading is an art in which the child gains the most from his own exertions. It is like learning to ride the bicycle; we can start him and help him, but he must, after all, do the thing himself. All the teacher can do is to provide material and opportunity for practice. The parent can also help very much by supplying the child with plenty of wholesome reading. And it is, moreover, very important that the parent should understand the basis of his child's instruction in school.

Indeed, by the time the child finishes the fifth grade in our schools, that is to say, in the average case, at ten years of age, he ought to read easily anything that he can understand. The mere power of reading should be mastered. I am speaking of silent reading, but it is a surprising fact that most children who can do this are also expert in oral reading. The favored child, to whom I have already referred, who has plenty of reading at home, is usually a good oral reader. The reason ought to be obvious. With power comes intelligence, and with intelligence expertness in many directions.

But mere power to read is not enough. There are many things to be done for the child even after he has acquired the art of reading. Let us think of them. They are rather important.

First, the child ought to form the reading habit. I do not know of any outcome of the school work more

important. Oral reading, valuable as it is, may be taught so as to absolutely prevent the inculcation of a love for literature. Our pupils (I speak of the country at large) do not go out from our schools with the reading habit. It does not seem to have occurred to all of us that the habit of reading to ourselves, which is the way most of us read when we read at all, must be formed like any other habit.

Second, we must train the child so that reading shall be a mental stimulant. With many people it is not. In school we must not fail to recognize that an important factor in the teaching of reading is the fact that the child's mind is expressing itself. But many reading lessons in school cannot at all be described as expressions of the inner nature of the child; they are just reading lessons. No one who observes the apathetic attitude of some lower-grade primary classes in their reading lesson, or who hears their unsympathetic tones, can believe that the soul of the child has anything to do with the matter. And this mental attitude toward reading established thus early is the seed out of which evolves the unintelligent work in reading in the later grades. The treatment of the reading lesson in the grammar grades often presents a dead lesson. The sum of the matter is this: We cannot teach reading, any more than we can teach anything else, and ignore the self-activity of the child.

Third, the ultimate aim in the teaching is intelligent recognition of content. Children say stupid things in

history, for example, because they imperfectly comprehend the language of the book. I think it would surprise many a teacher if he could know what a child really does get from the printed page. One reason why the answers of children are vague, uncertain, or fragmentary is that their ideas are vague, uncertain, or fragmentary.

Fourth, we must, through reading, increase the child's vocabulary. Those who can lay claim to a large vocabulary never obtained that vocabulary through the daily oral lesson in school. Indeed increase of vocabulary is seldom the result of a conscious effort. In learning a foreign language the basis is obtained by a direct effort to learn words, but if one ever really masters a language, the great body of his vocabulary is obtained through silent reading, hearing, and speaking. Why should it not be so with the child? In our own case also, the process of unconsciously increasing our vocabulary gives us greater and greater power in that line, and the longer we are at it the more rapid our progress. If this be also true of the child, is not a rapidly increasing intelligence implied in the process? For let it be borne in mind that in our own case the increase in our vocabulary was a secondary result based on an enlarging fund of ideas which demanded words. The increasing fund of ideas is another way of saying increasing intelligence.

Finally; children must acquire a love for and an appreciation of literature. If they are to do this, it is not sufficient that they be introduced to the subject; they

must live in an atmosphere of literature. And besides, it is not clear that the way to reach a position of mastery in this subject is merely to read aloud. I think that we can grasp the conditions and requisites of an appreciation of literature if we fix our attention on a parallel branch of art, music. How much would we ever learn of music, of its literature, of musical form and musical appreciation, if we only learned what we sang ourselves? We ought to sing to ourselves, but we must do far more: by hearing them, we must study works that we could by no possibility sing or play. We must attend recitals, symphonies, oratorios, as well as perform music ourselves. Why not so in literature? Should not the child read silently much that he cannot or has not the time to read aloud? Why should not much be read to him by the teacher? This does not exclude the regular reading lesson, but it revolutionizes the whole plan of procedure. Studying literature is not only reading aloud or silently so many inches of the printed page; it is the acquisition of the power of grasping and appreciating and loving worthy thought, as expressed in worthy language. The aim is not to say this language aloud, but to comprehend it as the expression of beauty and force. The question is, shall the pupil ultimately seek the best literature for his own reading?

CHAPTER XIV

SPELLING

ARTEMUS WARD said of Chaucer that "he writ good poetry but he couldnt spel"; he had a poor opinion of a man who "couldnt spel."

The world at large has much the same opinion, not of Chaucer, but of the man who cannot spell. At first sight it seems a little thing to make such a fuss about. As a disciplinary study, while not without value, it is of less importance than any other study in the school curriculum. It is entirely conceivable that a man might make a splendid success in life and still be a very poor speller. Many fairly successful people, indeed, are weak in the art of spelling.

And yet one of the most serious criticisms on the product of the public school is made at this point. An obvious reason for this criticism is that everybody can see bad spelling. A man may be a much worse arithmetician than he is a speller (and he generally is), but it is harder to find that out. He may conceal his weakness in arithmetic; indeed he may never be called upon to reveal it, but he must write; and at once, if he is a poor speller, he is detected.

In addition to this, spelling bears some such relation to a man's attainments as good clothes do to his personality.

When our penmanship and spelling are bad, the mind, so to speak, seems shabbily dressed. We set a higher value on these marks of culture than on facility of expression, accuracy, or even worthy thought. Horace Greeley's writing could be deciphered only by one highly paid compositor in the *New York Tribune* printing office. There were many in the office who wrote better than he. Indeed, there were none who wrote so badly. But Horace Greeley is remembered, and most of the others forgotten. The world will often forgive or condone bad penmanship, but bad spelling, never. Yet they stand on about the same level. And this adverse opinion persists in spite of the fact, that any one can verify, that while good penmanship and spelling may go with a good mind, they frequently do not. Edward Eggleston says, in "The Hoosier Schoolmaster," concerning the champion speller of Flat Creek :

"Jeems Phillips was a tall, lank, stoop-shouldered fellow, who had never distinguished himself in any other pursuit than spelling. Except in this one art of spelling, he was of no account. He could not catch well or bat well in ball. He did not succeed well in any study but that of Webster's Elementary. But in that he was — to use the usual Flat Creek locution — in that he was 'a hoss.' This genius for spelling is in some people a sixth sense, a matter of intuition. Some spellers are born and not made, and their facility reminds one of the mathematical prodigies that crop out every now and then to bewilder the world."

This prelude is not a plea for bad spelling, or even an apology for the absence of good spelling. It is a demurrer entered to arrest the hasty judgment. Good spelling is important ; so are good clothes; but in both cases there are considerations far more important. It is unfair to urge the spelling criticism on our children as final simply because it is the easiest criticism we can make. It is my judgment that the spelling of most people is in advance of their other acquirements. If that be a fact, it is an unfortunate fact. To return to the parallel of good clothes, it suggests the definition of a "dude," "A ten-cent man with a ten-dollar hat."

There is no subject in which there is more pains taken in school than in spelling. And the product of the spelling lessons is very satisfactory. Why, then, the inadequacy of the practical product? That is a question that few teachers ask. I have in mind an amusing incident of a teacher who taught spelling in the high school. She said, "The grammar school pupils come here not knowing how to spell. I have to teach them." And she went at the task in precisely the same way the grammar school teachers had gone at it, giving lists of words no better than those the pupils had already had, and taught by the same methods, excepting that some of the lower school teachers taught better.

Now the words that our children misspell are not the spelling book words, but the words of their own vocabulary. The spelling lesson is usually not made up of these words, but of other words. This seems absurd. Yet that

is the way in which spelling has been taught for a long, long time. When we consider that the great majority of errors, at least in the earlier years, have to do almost exclusively with familiar words, *i.e.* with the child's own vocabulary, it seems clear that if we can extirpate such errors, we can largely clear up the child's bad spelling. Why, then, should we go on endeavoring to teach a new vocabulary and leave this mass of inaccuracy behind us? Such a course of procedure is illogical in the highest degree.

There is a distinction to be made between teaching spelling and increasing the vocabulary. The former has to do with the child's own errors, the latter with words that he does not know. But we jumble the two together as if there were no difference. If we realized the difference, we would not do some of the strange things we do in our so-called teaching of spelling.

Again, no method of teaching spelling is logical that does not cause the knowledge to become immediately available. A word must become a part of the child's vocabulary before it is learned in a practical sense. Therefore the increase must be very slow and the words easy. The new words should be but little in advance of the vocabulary of the pupil. The child who reads in a third reader uses a vocabulary on the grade of the first and second reader.

It is not to be hastily assumed that a large field of instruction may not be covered by the use of a small number of words. Many words may be safely left to take care of themselves; many words present no orthographical

difficulty ; many derivative words may be omitted if a few simple rules of derivation are learned ; again, there are many words belonging to maturer years, easy to spell when the time for their introduction occurs. The important consideration, however, is this : Every rational teacher knows that a comparatively limited vocabulary is the outcome of the school course. Subsequent acquirements are to grow out of a trained power of observation. This means that the power of taking in the image of the word rapidly and accurately must be acquired. If this end be attained, the actual vocabulary of the pupil is a subordinate matter. He now has the power of accurate seeing.

Here enters again that great law of education which Dr. Hill felicitously describes as the law of the "gracious overflow." In teaching one thing, we unconsciously teach another ; that is to say, in all good teaching there is a tendency to accuracy and even to a knowledge that exists beyond the thing taught.

An extremely interesting and curious fact to be borne in mind, a fact generally forgotten, is this : most of the errors that children make are in words that they have learned through the ear, not through the eye. They make but few mistakes in words that are first met in writing or in print. The child has learned to speak the familiar words before he saw them printed ; and when he saw the correct form, it did not displace the incorrect form already in his mind.

Perhaps one of the fertile causes of failure is our persist-

ence in spelling in columns. Children will often hand in a faultless column lesson of difficult words and a dictated paragraph containing words much easier but badly spelled. We should not forget that the ultimate purpose in the teaching of spelling is that the pupil shall write correctly, not in columns, but in paragraphs.

Are we not guilty here, as in so many other cases, of spinning our courses of study from our own heads and not from the facts of childhood?

It has seemed to me that of all the blind teaching we teachers do, the teaching of spelling is the blindest. It is empirical in most cases; reason, much less psychology, enters very little into our methods. We differ as to oral and written spelling, we differ as to the propriety of dictating words in sentences or in columns, and we differ as regards the use of spelling books and the degree of difficulty of the words used; but why we differ, or what is the psychological basis of this or that method, few of us can say. And so we go on, and the product is bad, and we are criticized severely by the public because our graduates "can't spell." My only hope of interesting my readers rests on inducing teachers to make a sincere effort to apply the principles of psychology to facts drawn from the schoolroom. It is an effort, semi-scientific, at least, to get at causes. The inferences have seemed sufficiently important to warrant me in radical changes in method in my own schools, and I offer these changes to you, not as finalities, but with the hope that they may turn your thoughts along somewhat new lines.

While superintendent at Trenton, New Jersey, I sent to two classes in one of the schools two extracts to be dictated by the teachers and written by the pupils. The classes selected were the fifth and seventh grades. In that city the first grade usually represents two years; therefore, the pupils in the grades tested may be said to be in the sixth and eighth years in school; *i.e.* of an average of eleven years in one class and thirteen in the other.

The extracts selected were the following:

SIXTH YEAR. "Once upon a time a man and his son were going to market, and they were leading their donkey behind them. They had not gone far when they met a farmer, and he said, 'You are very foolish to walk to town with that lazy donkey walking behind you. What is a donkey good for if not to ride upon?' 'Well, I never thought of that,' said the man, 'and I am willing to please you'; so he put the boy on the donkey and started again on his journey. Soon they passed some men on the roadside. 'See that lazy boy,' said one of the men, 'he rides the donkey and makes his poor old father walk behind.' When the man heard this, he called to the boy and said, 'Stop a minute, let us see if we cannot please these men.' Then he told the boy to get off, and mounted the donkey himself."

EIGHTH YEAR. "One day, a ragged beggar was creeping along from house to house. He carried an old wallet in his hand, and was asking at every door for a few cents to buy something to eat. As he was grumbling at his lot,

he kept wondering why it was that folks who had lots of money were never satisfied, but were always wanting more. 'Here !' said he, 'is the master of this house. He was always a good business man, and made himself rich a long time ago. Had he been wise, he would have stopped then. He would have turned his business over to some one else, and then he would have spent the rest of his life in ease. But, what did he do instead? He took to building ships and sent them to sea to trade with foreign lands. He thought that he would get mountains of gold; but there were great storms on the water, his ships were wrecked, and his riches were swallowed up by the waves. Now his hopes all lie at the bottom of the sea, and his great wealth has vanished like the dreams of the night.' "

The words misspelled were marked by the teachers of the classes and returned to me. Availing myself of the assistance of a number of high school girls, I subjected the papers to the following treatment :

At the bottom of each paper were written the words misspelled in the paper ; in each case the word correctly spelled was first given, and the incorrect spelling followed. These records were afterwards cut into slips and arranged alphabetically. An alphabetical table was then made out, giving under each word its various misspellings. To illustrate : " foreign was spelled in six different ways, but there were nine cases of misspelling this word, as follows : *forign*, four times ; *foreigh*, *forhen*, *foren*, *forigen*, *forgin*, once each."

There were in all 324 cases of misspelling, 77 words misspelled and 202 forms of misspelling. The lowest number of forms of misspelling was one, the highest 18, the latter in the case of the word, journey. There were in all eighty papers examined. No attention was paid to the difference in grade. After this preliminary work had been completed, and the matter was in systematic form, I called a conference of about thirty intelligent teachers, and submitted the results of the investigation. The matter was discussed as thoroughly as the time permitted, and some light thrown upon the meaning of the data.

Before considering the facts developed and the inferences drawn, a preliminary observation may be in order. It may be objected that the number of pupils tested was small. Usually in child-study investigations a vast number of cases are treated. In answer I desire to say that some of the lessons that I have drawn from the investigations are overwhelmingly indicated in the field covered, and I do not think that a wider field would reverse these conclusions. Regarding certain other conclusions found in this paper, I admit the paucity of data. In my own mind these latter conclusions are clearly indicated, although, of course, not fully proven. The investigation must, of course, be regarded as experimental or preliminary. I might add, however, that in widening the field we meet complications, and introduce other considerations whose influence should not be lost in the mass, but should be estimated separately. For instance, the school investigated was located in one of

the best portions of the city, and was composed of children of American parentage. Suppose I had mixed with the results I have obtained those drawn from sections where the foreign population is in the ascendant. I think my results would have been confusing. The foreign children should be examined by themselves. They offer evidence of two kinds: First, evidence corroborating inferences drawn from other quarters; this evidence is just as valuable, considered separately, as if it had been drawn from a mass of mixed data: Second, foreign localities teach a lesson peculiarly their own, and this we cannot afford to lose by mixing the data. Besides, in the investigation of spelling do we not first need to know the difficulties that the native-born population finds; and second, those that the foreign encounters? The former are essential errors, often, perhaps inherent in the language. The special difficulties of the foreigners are inherent in the foreigner.

The disclosures of the investigation may be approached in a rather interesting way by taking a few words and observing the various forms of misspelling. I shall begin with the word, journey. On this word the pupils expended the wealth of their ingenuity. I could not have invented so many spellings myself. I give the entire list: *journey, journy, jerney, gerney, jornay, jeirnie, jernary, gourney, journei, jurony, journey, yourney, jouery, jer, ji, jou.* Let us consider this list in some detail. It gives, as will be seen later, a conspectus of nearly the whole field.

There are 18 of these spellings, and the first 13 are

founded on aural percepts; that is to say, the ear has determined the wrong spelling. Of these 13 forms some are repeated by more than one pupil, thus: *journey* is given 5 times; the 13 forms, in fact, represent 22 mistakes. There were 27 mistakes altogether in the spelling of journey. Therefore, almost 82 per cent (22 out of 27) of the mistakes were ear mistakes. I mean that in such mistakes the boy had a percept of the sound "journey" and that he translated the sound into writing in his own way, and there were 13 different ways. These pupils had seen the word "journey" many times; but they had also heard it many times, and it was the aural percept that dominated. Probably they had written the word journey in spelling lessons, and had been corrected and made to spell it right. All futile: the sound of the word determined the spelling in accordance with the boy's views of orthographical combinations. I should like to give out the same exercises to the same pupils again. The same pupils would probably spell journey wrong again, and in accordance with the phonetic laws; but would they the second time adopt the same wrong spelling?

I may as well say here that the whole investigation clearly indicates this law: viz. that the sound is the dominating element in children's spelling. I might give many illustrations, but one must suffice: foolish is spelled *foullosh*, *fulish*, *foulies*, *folish*, *follish*, *foulish*, *fourshil*, *furlash*.

Now, what does this teach? In my opinion it teaches

this, at least, — that spelling cannot be taught by writing alone. When a boy writes *jerney*, that visual percept satisfies his view of the facts of the case, of course, and I wish you to mark this statement: he does not *see* it to be wrong. But when the word is corrected at the end of the lesson, does not that fix the proper spelling? Not always. The wrong form has been associated with the sound, and the association has not been broken. Why? First, because of the interval that elapses between the writing and the correction. The correction should be made instantly, with a shock, as it were, and this can be done only in oral spelling. Second, the association must be broken not once, but many times, if it is to be completely demolished. Now oral spelling has greatly the advantage of written spelling in this respect. You can spell a word one hundred times orally while you are writing it ten times. Rapid oral spelling bears the same relation to written spelling that rapid mental arithmetic does to written arithmetic. In my judgment the oral spelling should always both precede and follow the written spelling.

In my case this means a complete overturning of my previous notions. For many years I had argued in this way: spelling is used only in writing; therefore the visual picture of the word alone is of consequence. Therefore spelling should be taught exclusively by writing and in sentences. During the last few years, to be sure, I had been weakening on this theory; but because I could not see that my theory was turning out good spellers rather than because I saw flaws in the theory. But the

overwhelming evidence presented by this investigation reduces the matter in my mind to a certainty. The psychology of the written method is incontestable, but hard oral drill is evidently suggested by the predominance of ear-mindedness, indicated in the present investigation.

Let me, in discussing this question of ear-mindedness, call your attention to some subordinate considerations under the same general heading. They seem to me to be of great importance, and to throw a bright light on the relation of oral to written spelling.

First, it is to be remarked that not only do pupils know the sound of journey, but that some of them know it wrong: *e.g.* note *jorney*. The pupil who wrote this probably pronounces it with a long *o*.

Take the word swallowed. I give the forms written by the pupils. *Swalloed, swolloed, swolid, swolled, sallowed, swalled*. Note that the boy who wrote *swalloed* has the correct sound, and yet he wrote it wrong; but the boy who wrote *swolid* did not even have the correct sound; and he *must* write it wrong. The latter fact is true of the writers of *swolled* (four boys), and *swalled*. To proceed with a spelling lesson when everybody has the correct pronunciation of the words does not always result in accurate spelling, as has been already suggested; but to proceed, as many teachers do, without being sure of the pronunciation, is surely unwise. Take wondrously, spelled three times *wonderously* and once *wondersly*. Do not these represent wrong aural percepts to start with?

Again, still considering ear-mindedness, the investiga-

tion indicates the interesting fact that certain pupils attach certain phonetic power to certain letters or combinations of letters. Thus, returning to journey, in *gerney* and *gourney* this is the explanation of *g*, and in *jeirnie* of *ie* and probably of *ei*; in the spelling *creaping*, note *ea*, and *creping*, *e*; etc. Now this trouble is inherent in our language, and presents formidable difficulties. We have few rules, and they do not help us very much. For instance, take the rule: *g* is soft before *e*. Well, then, what is wrong with *gerney*? We certainly spell *germane*.

I call your attention to this suggestion: These wrong views on phonetics are probably individual with each pupil; they are idiosyncrasies. This is very important if true. A little investigation, even notes taken from time to time, will reveal the tendencies of individual children in this matter and enable the teacher to anticipate what the child will do, and to prevent his writing the wrong letter, not only in journey, but whenever soft *g* is suggested. Thus, "We have journey in to-day's lesson. With what letter does it commence?" "With a *j*," says the majority. "With a *g*," say a few. "Now let us look," says the teacher. But note that this method of procedure is oral. It has to do with an aural percept, and contemplates the immediate aural correction of incorrect aural percepts. I insist on immediateness of correction. To wait an hour will not do. And I insist on the first approach being made through the ear, for it is the ear-mind, if you will allow me the expression, that is in error.

Again, one of the interesting and amusing facts concerning this matter of ear-mindedness is the contempt that children have for unnecessary letters.

Mark Twain once expressed his admiration of a young lady who, in a word game, spelt *caf* for calf. He argued a certain directness, going straight to the point, in the young lady's make-up. And there is as much wisdom as wit in the story. It is our spelling that is irrational, and it is the bad speller that is rational. My investigation, of course, offers many illustrations of the tendency that I am discussing. Thus, note *journey*: (What is the use of the *e*?) *Jurny*: (What is the use of the *o*?) *Foks* for folks, *stoped* for stopped, *reck* for wreck, etc. In the word swallowed there were ten misspellings, and in only two of these did the last *w* occur.

In leaving this question of ear-mindedness, may I not suggest an explanation for the well-known fact that children spell unusual words well, and familiar words incorrectly? The unusual words have never been used in such a way as to form an aural percept. The percept is visual, and therefore correctly written. But the child has learned to speak the familiar words before he saw them printed, and when he saw the correct form, it did not displace the incorrect form already in the mind.

An interesting psychological inquiry is this, and I earnestly urge it on your attention: Does there lie in some corner of each child's mind a visual percept that is the constant translation of the aural percept of the word the child knows — *jerney*, for instance? And

when he transfers this percept to paper, can he write anything else? Adults are often in doubt as to the spelling of a word; but with regard to familiar words, at least, the child is in no doubt; he writes *caf* with an insouciance that is simply delightful. If these visual images do subconsciously exist, notice how they persist year after year in spite of all your teaching. If they do exist, why not acknowledge their existence, expect them, and combat them first and last through the approach by which the image entered the mind, viz. the ear? To blame or reproach a child for such errors is like blaming him for being left-handed.

I dismiss, for the present, the question of ear-mindedness, and come to a class of errors that clearly arise, at least in part, from visual aberrations. My word journey does not help me here, and this, of itself, is an interesting fact, as I shall presently show. Let us take the word foreign. I give the spellings: *forign* (4 times), *foreigh*, *forhen*, *foren*, *forigien*, *forgen*. Now, several of these spellings are entirely or practically phonetic. Notice *foren*. But on the other hand notice the letter *g* occurring in every spelling but two, i.e. in 78 per cent of the cases. In the last spelling, *forgen*, it is hard to believe that there was any aural percept at all. The *g* shows that the eye has been active in every case but two; just as the last *w* was left out in *swalloed*, where the ear was concerned, the *g* is studiously put in where the eye is concerned. The pupil does not know how to spell foreign, but he knows that there is a *g* in it somewhere. Take the word minute. I

have 20 misspellings, taking 17 forms. Now the phonetic errors given are these: *minnet*, *minuete*, *minnote*, *menat*, *minet*, *minete*. But on the other hand, consider these, remembering that from the child's point of view the letter *u* is the unreasonable part of the word. *Minutt*, *mintue*, *mint*, *minunt*, *minut*, *minuate*. In some of these spellings the phonetic principle has also something to do, but the eccentric dancing around of that letter *u* is a purely visual matter.

Consider the two words minute and foreign together. Certain peculiarities are observable when they are contrasted. Minute is a common word, and therefore there was a previous image corresponding to the sound. But the printed or written word was *outré* as far as the *u* was concerned, and hence arose errors that are not phonetic. Foreign is not a word for the child's vocabulary; it is purely visual, and hence the phonetic element enters very little into the misspelling. Notice also that there were only 9 misspellings of foreign, while there were 20 of minute. Of course, foreign had no original settler to expel, and minute had; and in 20 cases the original settler, you see, held his ground.

I think this argument indicates that we need not fear the unusual words nor the danger of wrong percepts obtained visually. The fight must be made on familiar words, where aural percepts are concerned, for, as I have already said, it is a fight to gain territory already occupied by obstinate residents. With reference to the class of words typified by the word foreign, it is merely a

question of learning, but the learning of the words typified by journey means the unlearning of an alien language.

Teachers generally make their spelling lessons out of the unusual words, and every day violate the principle for which I am now contending. Spelling books almost unanimously offer words unusual to the child. I almost think that if we taught the child's own vocabulary well, we could leave the new words to take care of themselves. When the child wants to use a new word, he can be taught to look up the spelling, as you and I do. We waste time in teaching spelling as we teach it.

I now desire to touch a galaxy of errors that cannot be classified under either of the headings, ear-mindedness or eye-mindedness. At first sight they seem to be matters of invention. Some of them are rather interesting.

First, note that peculiarity among children of putting in letters that have no force in the sound of the word. *Minent* and *minth*, for minute; *jernary* for journey; *midt* for met; *pasend* and *pasted* for passed, *crepting* for creeping; *leanding* for leading; *satisfided* for satisfied.

What do these mean? I have gone over several of these errors thoughtfully. I cannot say that I can offer anything conclusive, but two or three suggestions seem to arise from the consideration.

First: The trouble may be that the child is of foreign birth or parentage. For instance, final *th* means *t* to a German. If you know the pupil to be foreign, you may have the key.

Second: In not a few cases where the pupil was uncertain about a word, while he was thinking he found himself compelled to hurry on because the teacher was dictating a new sentence. Some prominent sound or letter in the word, as *r* in journey, dominated and went down on the paper because the faculties were not acting normally, *e.g.* *elése* for else. Sometimes a sound or letter belonging to another word in the sentence was dominant, and introduced itself into the word being written.

Third: I find the process of association very active in writing. In the instances given, note *crepting*, *leanding*, and *minth*. Think of the actual words crept, lend and month. I do not say that these words were in the child's mind, but I have a little evidence to show that they might have been. The investigation offers a number of instances in which other good English words were actually used for those dictated, the new words making no sense whatever, and yet leaving me entirely sure that the new word had taken the place of the old one. Take a few illustrations. Wrecked was spelled *wreathed* and *wretched*. This is not a case of misspelling. It is an actual intrusion of a new word in the place of the word dictated. Now, when *minth* was written for minute, might not month have intruded itself in the same way? To give other illustrations: Were was spelled *where* and *was*, and *make* was used for made. In many other cases, while the intrusion is not so clearly indicated, there is room to suppose that there was such an intrusion. In such cases, at least, we cannot be sure that the child did not

know how to spell the word, as when he spelled *farther* for father. I think in this case, that he knew how to spell father, but the word farther got into his mind. Children run off on tangents very easily, and many so-called errors in spelling are tangential errors.

Fourth: Certain letters tend to intrude themselves with certain children. *T* is a very intrusive letter. Why do people say *onect*? I have on my list *pasted* for passed, *wondereslly* for wondrously, and *leiting* for leading. I knew a little girl who invariably put in an *n* after *ay*, as: "What was he sayning?" and "I was playning." I think that these may be called idiosyncrasies, and should be treated as such. Similar considerations apply to the substitution of letters, as when *mourted* was written for mounted.

I pause here to direct your attention as forcibly as I can to this fact applying to the present section of this discussion. It is its practical outcome. Such errors as we are now considering are not errors in spelling at all; that is to say, they do not indicate that the child does not know. They arise from haste or from the domination of an associated idea. The teacher should not correct such errors, but should permit the child to discover them himself by reading over his papers several times, until he finds them; much less should the pupil lose marks for them. It is unjust to say the boy does not know how to spell when he has written *mourted*. Give him a chance to correct his own paper, and see if this is not so.

But how few teachers seem to know this! There is only

one fact in their minds when they correct a spelling paper, and that is that the word was spelled wrong. Let me enforce the lesson I am now trying to teach by the consideration of a few more errors, kindred to those just considered, to which the practical statements I have just made apply with equal force.

There is a tendency on the part of children to leave out letters. I have many illustrations in my table of errors. We are so familiar with this in our own writing that we should not be surprised. In our case it is not because we do not know, nor is it necessarily so in the child's case. It is the result of other causes; some of which have been referred to, which affect the manual act of writing. Here, again, the child should be permitted to find his own error, and should not be treated as if he did not know his lesson. The same argument and suggestion should be made again in cases in which a child has inverted letters, as *jurnoy* for journey.

So also must we regard the substitution of the singular for the plural; as ship for ships, or the opposite; the putting in of another part of the verb, as *send* for sending; the use of one word for another, as *then* for them, *the* for they, *though* for thought. They are not errors in spelling; or they may not be: at least the pupil ought to have the same privilege that we enjoy in our correspondence, the privilege of reading it over to himself one or more times.

Permit me, for a moment only, to call your attention to a class of very peculiar, but interesting, errors which

deserve a similar treatment. I refer to those cases in which the word is not spelled at all. Take these spellings for journey: *jer, ji, jou*. Now, perhaps the child did not have time for consideration, or was nervous. The state of mind may be similar to that already described in the paragraph in which I have tried to show why a boy put in an extra letter. Here again the child should be permitted to correct his own errors by reading over his own paper. It is not wise to infer from this kind of error that the child does not know.

The charge is made against some child-study investigations that they traverse a great area to discover what was known before. That may be the case in the present investigation. Whether it is or not, I am certain of this, that the inferences to which I have been inviting your attention represent principles that are every day violated by thousands of teachers. The following inferences seem to me to be reasonable.

First: I call attention to the broad inference from this investigation, that the criticism of spelling should be analytical. Errors in spelling differ in kind, and they differ as to their origin, and they demand varying types of treatment. But, in practice, there is no analysis in the treatment of spelling. The teacher recognizes the fact that seven words out of the fifty are wrong, and she recognizes no other fact. But the seven errors may each require special treatment. It has been shown that some errors are not errors in spelling at all. They are errors of nervousness, mental tricks, or merely errors of writing, as

when a boy spelled *journey* for journey. Furthermore, the pupil should be permitted to discover his own errors in many cases. Such errors as he can discover should not be marked against him. Again, the error may be in the percept of the sound of the word, or it may be that the sound and a certain spelling are so closely associated that hard knocks are necessary to break the connection; or the child may be in error as to the phonetic force of certain letters and combinations of letters; or he may have idiosyncrasies regarding spelling that require individual treatment; or, finally, the eye may be at fault.

Of course all this means fewer dictation exercises and more detailed and analytical consideration of such exercises. The present plan of many exercises and a superficial correction evidently does little good. I think it may be shown that it even strengthens certain wrong tendencies.

Second: The importance of a larger amount of oral work in spelling ought to be apparent, for by far the larger portion of the errors arise from false percepts derived through sound. I have already called attention to the probability of there existing subconsciously in the child's mind a visual percept, which is the translation of the child's aural percept of a word. Note carefully that this relation between the false percept and the sound is probably individual and is intimate beyond belief. It takes a convulsion to separate them. The sound journey and the spelling *jernie* have been friends a good while. Do you think that one friend is going to

abandon another just because you introduce a new one, a little prettier? By no means. We make our bow to *journey*: "Happy to know you; be pleased to meet you again," and we go traveling off with *jernie* just the same. You must utterly destroy the connection before you can establish a new one. This means a running fight with the false percept — not one fight, but many; and this means much oral work, covering, mark you, a limited area. It also means the correction of the error the instant it shows itself. It will not do to wait. Here again, ample oral drill is demanded. The dictation exercise is important, but only as a test of the success of your oral drill. Of course I am here referring only to sound errors.

Third: We are not to forget that the ultimate purpose in the teaching of spelling is that the pupil shall write correctly; not in columns, but in paragraphs. The oral drill and the column work must be considered not as ends in themselves, but in view of practical writing. Teachers are perfectly familiar with the fact that pupils will write the column lesson much better than the dictation lesson. But success in the latter is the only true success, and must, of course, be made the standard of attainment. The word drill and the column drill must be manipulated for the most part to prepare for the paragraph work or to correct the errors found therein.

Fourth: Note the great preponderance of what I have called sound errors, indicated in this investigation and note also that these errors have to do almost ex-

clusively with familiar words; *i.e.* with the child's own vocabulary. This means that if we can extirpate such errors, we have largely cleared up the child's bad spelling. Why not do this? Why go on endeavoring to teach a new vocabulary and leave this mass of inaccuracy behind us? I believe that such a course of procedure is in the highest degree illogical. Yet it is the course followed by most teachers. I have already touched on this subject, but lay special emphasis on it at this point with a view toward making a practical suggestion or two. Any observant teacher can, within a year, make a list of words that are actually used by her pupils, and to a greater or less extent used incorrectly. This is her most valuable spelling book. I do not mean that no other spelling books may be used; but their use must be subordinate, and they should be used, not to teach spelling, mark you, but to increase the vocabulary.

But regarding the increase of the child's vocabulary, a word of caution is necessary. Few of us realize how very small is the possible daily or weekly increase in the child's knowledge in any line. This is especially true with regard to language. No child can add to his vocabulary one tenth of the number of new words that many teachers put in a spelling lesson. Two, three, or at the most five, is a large daily increment. Try it yourself in the learning of a new language; German, for instance. If this be true, the necessity for any large use of the spelling book disappears, and the drill falls back on the child's own vocabulary. When teachers grasp these two correlated

essentials, first, drill on the child's own vocabulary, second, a very small daily increment to that vocabulary, accuracy in spelling will result. In other words, when we stop trying to do so much, we shall succeed in doing more.

I add a suggestion which is a logical corollary to what I have already offered. The increase in the child's vocabulary must be for use in that vocabulary and subject to subsequent drill. Therefore, the words must be easy. This principle is violated by most courses of study, and therefore by most teachers. The child who reads in a third reader uses a vocabulary on the grade of a first or second reader. The fourth-reader pupil's own vocabulary is scarcely above that of the second reader. Here is the indication for the spelling lesson so far as the new words are concerned. The words given out in our spelling lessons are far too difficult.

Fifth: I claim that children should correct most of their own errors. Not only so, but they should find many of them without any help from the teacher. The blue pencil is used far too much. It is necessary, however, to note that the pupils probably will not be able to find the sound errors at first. *Jernie* will not arrest the child's attention. It looks perfectly natural. *Foring* for foreign will arrest his attention, for he is not sure about foreign, and he will consult the dictionary. But he is sure about *jernie*, and passes on. When *jernie* does arrest his attention, then you have broken the association.

Let the child do all that he can for himself before you

interfere. Then apply your skill on the residual errors, and apply your skill skillfully.

Sixth: Finally, I call your attention to the moral phase of the problem. The right of children to help themselves, just discussed, is indeed a moral consideration, but there is another and a very serious one. You remember my claim that many errors are not spelling errors. They do not mean that the child cannot spell the word. They mean that he was nervous, or, as I have said before, that his mind played him a trick, or else that he needed time for consideration. Now, when you mark ten words wrong, and six errors are of this character, you are unjust as well as unwise, for there are also errors that are pure carelessness, or that indicate willful lack of study. In one set of cases the child has not tried, and in the other he has tried. By your process you make no distinctions. You hold the child up for unpleasant criticisms, and make unjust comparisons. Perhaps the child indicates no sense of injustice, but try the rôle of justice, and see how quickly he responds. "Some of you were hurried and wrote words that you didn't mean to write. Now, look over your papers, and I know you can correct many errors. I do not want to take any advantage of you." Very gladly the normally constituted child hands in his improved paper. Now, you can say, "You have only two errors," and that is more stimulating than to say, "You had eight errors." Try this plan, for a few weeks, and then go back to the old way and see if the child is not conscious of injustice. The

only reason he was not conscious before, was, that he did not know that there was any other way. It pays to be just, even in spelling.

But this moral question has one other phase. I am very fond of Froebel's claim that there is no true education where the child is not made conscious of power. And Froebel distinctly means power. He is to be made conscious of power; he is not to be made conscious of failure. What does the teacher generally do? He emphasizes failure. It is a mistake. Emphasize success, emphasize power. By recognizing the child's ability to correct many of his errors, we emphasize power. By holding up a long list of errors we discourage him; or, putting it more forcibly, we evolve consciousness of defeat. Give the child a chance, and then say, "Well done, you had only one error to-day, and I can see how you made that, and I know you will not make it again after you understand it," etc. Take my word for it, there is always a response to this kind of treatment. Do not be so fond of the blue pencil, or, if you must use it, use it to mark the words written correctly, and then the blue will be on the paper and not in the child.

I hope that my readers will continue to investigate the causes of wrong spelling, and the condition related to it, so that better methods of teaching the subject may be discovered.

CHAPTER XV

LANGUAGE

THE most discouraging subject in the whole school curriculum is that known as language — the English language. The demands made on the child are simple; merely that he express himself orally and on paper, accurately and freely. It is not demanded of him that he express great thoughts, but simple, everyday thoughts. In a word, it is demanded that he be able to convey to others what he has in his mind. For this we give him eight or nine years, not to speak of the high school. What are the results?

They are most unsatisfactory. I speak of the country as a whole. About thirty years ago a mighty revolution in the teaching of English swept the country. It was mainly a revolt against instruction in technical grammar, and a demand for direct instruction in language by simply giving the children plenty of English to write. The revolution spent its force, and its outcome was beneficent. We paid more intelligent attention to getting results, and on the whole there was improvement in the use of English. But the improvement fell so far short of any reasonable standard of good writing, that it may be described as inconsequential.

The outcome of language teaching is unsatisfactory almost everywhere. The result of eight or nine years of persistent instruction is pitiful. The high school is emphatic in its condemnation of the results. It matters not that the remedies suggested by the high school teachers are utterly inappropriate and inadequate, and it matters not that the high school does little better with the material received than the elementary schools have done; the estimate of these teachers is worthy of consideration. Indeed, the grammar school teachers are only too well aware of the correctness of the charges. Everywhere throughout our broad country the same characteristics mark the outcome of English teaching in elementary schools. They are, (1) lack of freedom in the use of language, (2) lack of accuracy, (3) lack of fertility of thought. These lacks are frequently serious, sometimes amazing, and always clearly evident except in favored towns or with exceptional children.

Let us go into a little detail. Taking the country as a whole, then, these are the facts.

With regard to freedom it is a matter of common knowledge that children use language, both in speaking and writing, with painful effort. They do not speak or write as they bicycle or skate. To the end of their school course they communicate their ideas awkwardly and with very conscious effort. This is true even in speaking, if the thing said involves more than a sentence. In writing they use English with the same freedom that most people display when they write with their left hand. They ex-

press their thoughts on paper with reluctance, and they never write at all if they can help it.

Regarding accuracy, let the oral or written efforts of the pupils tell the story. The sentences that children use in any continuous effort in speaking, even in recitation, are crude and inaccurate. Often the teacher repeats the child's expression after him, making it correct, saying, "You mean to say," etc. He did not mean to say that at all. He meant to say just what he did say. Often the child does not finish his sentence audibly, but permits it to fade away into an inarticulate murmur. Generally the teacher accepts this, filling it out, telling him as before that he "meant to say," etc. The knowledge of the excellent things that he "meant to say" must be very gratifying, and, at the same time somewhat surprising.

In written work, especially incidental work such as tests, inaccuracy in construction is so common that the shining exceptions do not relieve the burden of general failure that the teacher sadly carries. Sentences are incomplete, faulty in grammatical agreement, show a feeble power as to pronouns and tenses, and are loose or involved in construction.

In the matter of fertility of thought it is well known that this is often lacking when the accuracy of expression is most commendable. Children say faultlessly what it is not worth while to say at all. This is very significant. It means this: So much time and strength has been expended on form that thought has been forgotten or excluded.

Two questions suggested by this survey become highly interesting: First, what is the matter with the schools? Second, what are we going to do about it?

The answer to the first of these questions is exceedingly difficult. There are, however, two classes of explanation that may be offered, the first class including those that are beyond the teacher's control and the second those that are within his control.

In the former class of explanations, let us note first that the teaching of language is made extremely difficult by the fact that much of the influence exerted on the child out of school tends to nullify the progress made by pupils in school. This is true of no other subject except morals. In arithmetic, for example, the child is taught that two and three make five, and that proposition is not disputed when he arrives at home; but if he is taught that it is wrong to say, "Him and me done it," that proposition may be and in many cases is disputed.

No one who has not dealt with children in practical efforts to teach the English language can appreciate the tremendous obstacles that arise from the consideration just noted. It bears directly on the main fact in the acquirement of language; namely, that we do not learn language voluntarily; we absorb it. This is primarily true of children. In later life we accomplish something by our own volition, although even then the most of our acquirements are involuntary. But children just breathe in language. They make no effort whatever; "they toil not, neither do they spin," but neither Solomon

nor any other grown-up man can compete with them. Let a man and his six-year-old boy go to France. Turn the child loose among French children of his own age, and let the father devote his time to studying the French language. In one year the boy will speak French as idiomatically as French children eight years old speak it. The father's French will probably be of the pigeon English variety. The man tries, the child does not, and the child comes out ahead. Incidental teaching is always more effective than formal teaching, and more lasting in its influence.

Now, this part of the problem as applied to schools works out thus: Our children get a little direct teaching during the school day, and incidentally hear a little good English. After school they proceed to the street and the home, where the real effective teaching is done. They bring to school the slovenly pronunciation and the slovenly English of the street and many homes, and the poor teacher labors wearily and to a large extent unsuccessfully to undo the work of the children's other teachers. The wonder is that he accomplishes anything at all. If it could be so arranged that a child would never hear anything but good English, the teacher's work would be comparatively easy.

There is a second possible explanation included in the class not under the teacher's control. It involves an unknown quantity, one element in the problem that educators have not yet seized. It is a fairly safe rule to follow in teaching, that when large bodies of children,

here, there, and everywhere, resist the teaching of a certain subject, nature is thus indicating that the subject should not be taught at all or should be taught in some other way. The work of children in language presents just this phenomenon. It would seem that the childish mind in grappling with so many things as are involved in the writing of a composition breaks down under the strain. The child must furnish thought material, he must determine the construction, he must arrange it on paper in good form, he must think of capitals, spelling, and punctuation, and finally he must perform the act of writing, and that, in the case of many children, is enough in itself. What is the inference? The conviction is growing that we demand this kind of work far too soon; we must be more patient and wait a little longer in the life of the child before asking all that is indicated above. Perhaps he needs more maturity than he is able to offer at the age at which we make our demands. We have certainly found this so in other subjects, notably in arithmetic. This is a serious question. The complications are too many. The child has to give his primary attention to too many details. He cannot attend to them all satisfactorily at the same time.

One thing is sure, and that is that interest disappears if the work becomes too difficult. There is a tendency on the part of teachers to go in advance of the child's spontaneity. This is always attended with a loss of self-activity on the part of the child. If the child has to wrestle with a difficult subject, then the effort that he

is required to expend, growing out of the difficulty of the subject, is so much subtracted from the form and grammatical construction and expression of the composition. Spontaneity vanishes, and with it interest.

One of the serious facts of education is the teacher's unwillingness to look facts in the face. Educators have either shut their eyes to the results that should have been regarded by them as data in a most scientific sense, or they have said that the results they have reached are all that can be attained.

It is equally true that whether we recognize the facts or not, we have been unwilling to be guided by them. We have spun our courses of study from our own brains and without reference to ascertainable data. Before us for years and years have sat the children. They have told us plainly whether our theories were producing desirable results or not. But with this vastness of data at our disposal, we have been governed not by the facts, but by tradition or pure theory, which we have been unwilling to abandon even in the presence of failure.

This unwillingness to accept the facts of the classroom, this perverse disposition to construct courses of study not based on facts, and to decline to subject them to the test of facts is and has been the gravest evil of our system of education. Everywhere, and in every subject, we are persisting in the use of study courses and methods of teaching that are manifestly not producing the desired results. In any other line of activity we abandon a method that does not reach the end in view. In educa-

tion we persist in it. Our case is that of the farmer who sees his neighbor's fields bearing rich harvests as a result of the rotation of crops, while his own farm yields scanty returns, and yet persists in sowing the same crops in the same fields year after year. The remedy is obvious; stop doing it, let us adjust our methods to the facts and stop expecting the facts to adjust themselves to our methods.

Many good people, teachers and others, say that the language of children is suffering because grammar is not thoroughly taught now. As a matter of fact the language of children is much better than when grammar was more persistently taught. The gain is not sufficient to occasion hysterics of joy among us teachers, but it is a gain.

The older grammars and many of the newer grammars state that grammar teaches the art of speaking and writing our language correctly. Really there is very little of the grammar that has any relation to correct speaking. English grammar is to be thought of from two standpoints: the one, its use in aiding pupils to write correctly, and the other, as a formal study for its own sake or to enable a student to analyze an English sentence, or to begin the study of other languages. It is generally agreed that the amount of knowledge necessary from the second point of view is not necessary from the first point of view. In earlier days, in teaching English grammar, the systematic presentation came first and the practice in the use of grammatical construction afterwards. Then came the so-called reform, and an

effort was made to approximate to the method of teaching foreign languages. In the earlier history of the reform it was assumed that grammar could be thrown out altogether, but gradually pedagogical opinion drifted back to the use of more or less grammar in the earlier stages of the study of English. Out of this condition of things sprang the brood of language books. The authors of these books, having discarded grammatical considerations, expended a great deal of effort, and exhibited much ingenuity in filling their books with unproductive material. As the considerations of grammar reasserted their importance, these authors introduced grammar little by little and in accordance with their own views of what was necessary.

Now there are errors that grammar does help us to remedy. They are popular errors, and we must have enough grammar to enable us to attack these errors. An example is non-agreement in person and number of subject and predicate. Then there are subordinate errors not often made. An example is the confusion in the use of "who," "which," and "that." Then there are errors seldom or never made. An example is the agreement when the antecedent is a collective noun. Finally, there are errors that we could not make if we tried. For example, "Prepositions govern the objective case." In Latin, or German, the government by the preposition is a serious matter, but what about the English noun? Is it possible to make any errors?

The real question to be decided is: is it sensible to

spend a large amount of time in studying matters that have no practical bearing on the child's speech? Has he so much time that we can afford to squander it thus? Yet this is what the grammarians demand. A little grammar is very necessary. For example: The extravagant use of connectives is an exceedingly popular error. One of the first things to do in the teaching of language is to train the child to use short sentences. Then many of his errors will not be possible. The well-known tendency of children is toward long, involved sentences, difficult of correction, and this is the occasion of many of the grammatical errors and other crudities seen in the work of the pupils of the upper grades.

The number of common errors among children is comparatively few. Some time ago, a statistical study of the errors most frequently made by children was conducted in the schools of an American city. It was found that there were six elementary considerations of grammar on which, if we place careful and concentrated attention, we shall clear up 80 per cent of the errors. But this is not what is done. We jumble all kinds of irrelevant considerations in grammar in with those that are relevant. Thus we succeed in doing two things: first, we waste precious time on matter that leads nowhere; second, we prevent the child's concentrating and drilling on the points of grammar that he does need to master. This is one of the causes of our poor work in English. Why not find out the common errors of childhood, concentrate on them, teach the grammar that

belongs to them, and extirpate them? It can easily be done. This would revolutionize our purposeless grammar work. For example, the pronoun would be found to require careful attention, the noun very little. The possessive case of the noun is a danger point, but the boy could not make a mistake in the nominative if he tried to do so.

The grammar was made for the child, and not the child for the grammar. If this is not the case, it ought to be.

It is important that pupils should make a critical study of our language through grammar. But let us place this critical study where it belongs, in the high school. It has nothing to do with obtaining a ready and accurate use of our language. A suspicion forces itself on one's mind that our present methods in grammar take little account of the fact of the child's mental development. We have skillful teachers, and our teachers work hard enough. I suspect that if the children could speak they would say, "You are taking up the consideration of difficult matters before the mind is prepared for them; you therefore fail and must fail."

Again, the teaching of language is frequently characterized by almost utter lack of purpose. Such a charge cannot be made against any other study. In arithmetic, for example, long division is supposed, at least, to be mastered at a certain time. In language teaching, nothing is supposed to be mastered at any time. Every question is always open, and is a part of the course of study to the end. The teacher teaches everything and all at the same

time. The daily lesson is based on a hand-to-mouth conception. To concentrate on a given subject, plan for a three months' or a six months' campaign and master that subject is not a part of our conception of teaching language. Concentration counts for as much in the teaching of language as in any other field of endeavor. The weakness of our teaching is that the teacher ignores nothing. It is demonstrable that the elimination of the unnecessary connectives in children's speech can be accomplished if the teacher does nothing else in grammar for a certain period. But the teacher does not do this. He corrects errors in connectives and in everything else, because he is teaching everything else. As a result, the pupil's attention is scattered, and he becomes proficient in nothing.

Another consideration of the utmost importance is this: The underrating of the function of oral work plays a very important part in retarding progress in language. In other words, we are in too much of a hurry to use the pencil. Here, again, we are in the presence of the data that the children furnish. The child comes to school using language freely. As soon as possible we put a pencil into his hand, and freeze him up. In a short time he has stopped talking. In order to have accurate language we must first have language of some kind. If the children will not furnish it, what are we to do? There is nothing left but to provide material of our own. But inasmuch as the child is going to talk his own language, why not start with his own language? In a word, fluency antedates

accuracy. In extinguishing fluency we cripple our teaching for all time.

All essential errors are made in speaking. When the child writes, he merely records these errors on paper. Why let them be recorded at all? The possibility of practice in the way of correction is great in oral language and scanty in written language, just because we can talk so much more than we can write. The habit of fluency is favored in talking; it is quenched in writing. In writing the child is occupied with a new set of mental coördinations involved in the act of writing. He has little energy to spare for thought or language. In speaking, his whole attention can be concentrated on the thought and language.

This is a fair illustration of the tendency to go ahead of the child's development. It is an educational disease. In "Dombey and Son," it is said of Dr. Blimber's school that "It was a great hot-house, in which there was a forcing apparatus incessantly at work. All the boys bloomed before their time. Mental green-peas were produced at Christmas, and intellectual asparagus all the year round. Mathematical gooseberries (very sour ones, too) were common at untimely seasons, and from mere sprouts of bushes. Under Doctor Blimber's cultivation every description of Greek and Latin vegetable was got off the driest twigs of boys, under the frostiest circumstances. Nature was of no consequence at all."

The Blimber germ is still active, although its toxic

qualities are somewhat modified. We shall grow wiser, as wise, perhaps, as Sam Lawson, the philosopher of "Old-town Folks," whose theory was that "Some things can't be druv."

Many teachers do too much of the child's work in teaching language, as in other subjects. The faculties grow by exercise, but exercise implies resistance. How can the child encounter resistance if the teacher does his work? To illustrate: The child in his composition has not commenced his sentence with a capital. The teacher points out the error with a blue pencil. Why? Why not let him find it out himself? He will grow strong if he grapples with the composition himself; he will grow weak if we do it for him. No one can learn to skate if another does the tumbling for him. Self-help counts for as much in teaching language as it does in skating.

These evils are real, they are venerable, they are widespread. But with a correct diagnosis a remedy is possible. To understand our disease is to bring the cure in sight.

The remedy seems to be this: Frankly acknowledge our wrong-headedness; cast tradition to the winds; cast aside any method, however ancient and respectable, that does not produce the results; sit at the feet of the children, learn what they can tell us of themselves; know precisely what we wish to accomplish and concentrate.

I have long held the opinion that we teach many grammatical errors that children commit very seldom,

and others that they do not commit at all. I have a theory that if we could get a sufficiently large body of data we would find that there is, among children, a degree of popularity of error, so to speak, and that if this could be ascertained the work of the teacher might be concentrated on the most important errors, making unnecessary the work he is accustomed to spend on errors that have no practical existence. I have in mind, also, the methods by which modern languages are taught, in which grammatical constructions are taken up, not in a logical, but rather a psychological order, an order determined by the child's mental power and the possibilities of practice with relation to error. A good German introductory book, for instance, will introduce grammatical construction in accordance with the author's views as to the ability of the pupils to take up the work, the orderly and systematic presentation of the subject of German grammar being given a place in the back of the book for present reference and possible future study.

I think that any one who investigates what has really been accomplished by our grammar schools in the matter of good English construction will be very much disappointed. The high school teachers who receive the grammar school graduates are unanimous in their condemnation. They do not talk very much about the methods, but they do talk about the outcome. The young men and women who reach the high school, so these teachers say, know next to nothing about English

grammar. In the attempt to teach Latin, German, or French, the difficulties of the high school are enormously increased by the total ignorance of English grammar on the part of the pupil, and the teachers of English in the high school insist that they are unable to point out the pupil's errors in the writing of English because he does not know the language by which those errors are to be described. I do not find high school teachers unfair in this matter. They admit that young children cannot take up the analytical consideration of English grammar, but they claim that at some time before the student reaches the high school he ought to have had a reasonable course in that subject.

Now, as already stated, English grammar is to be thought of from two standpoints: the one its use in aiding the pupils to write correctly, and the other as a formal study for its own sake or to enable a student to analyze an English sentence, or to begin the study of other languages. It is generally agreed that the amount of knowledge necessary from the second point of view is not necessary from the first point of view. Professor Whitney sums up the matter thus: "To make the young use their own tongues with accuracy and force, some of the rudimentary distinctions and rules of grammar are conveniently taught; but that is not the study of grammar, and it will not bear the intrusion of much formal grammar without being spoiled of its own ends." The questions to be decided are as follows: Granting that the systematic study of grammar should not begin

until a certain age, how much grammar, or rather what points in grammar, are to be considered before that time? Can they be considered independently of the rest of the grammar, and in what order and by what method should these considerations be taken up? When should this consideration of the subject cease and the formal consideration begin?

I do not claim to do more than offer a beginning in answering these questions, but so far as my study throws light on them, I confess that the conclusions to which I am forced are startling. They disarrange all my previous views, and point to a revision of the whole language curriculum and the language textbooks.

The investigation was conducted in the following way: On the twentieth of January, 1902, I requested every teacher in Trenton, New Jersey (where I was then Superintendent), from the fourth to the eighth grades inclusive, to have a composition prepared by every pupil. When there are nine grades below the high school, one must be added to the numbering of grades in this paper, the fourth being read as the fifth, etc. Each teacher was to follow her customary plan in giving out ordinary class work. The composition might be a reproduction or an original composition, as the teacher might choose. I asked each teacher to mark every composition thoroughly in accordance with the scheme presented in this study as Exhibit A.

EXHIBIT A

SCHEDULE OF ERRORS IN WRITING ENGLISH

1. **No sentence.** (Subject or predicate left out.)
2. **Extravagant use of connectives, making long sentences.**
3. *Wrong use of article, a or an.*
4. *Unnecessary use of article.*
5. **Non-agreement in person and number of subject and predicate.** Simple cases.
6. *Non-agreement when subject consists of two or more nouns or pronouns connected by "and."*
7. Non-agreement when there are two or more nominatives qualified by "every," "each," "no," or "not."
8. Non-agreement when two or more singular nominatives are separated by "or," "nor," "as well as," or other disjunctives.
9. *Non-agreement when subject is a collective noun.*
10. **Wrong formation of possessive case.** (Nouns.)
11. *Wrong formation of possessive case.* (Pronouns.)
12. Wrong use of possessive case when two or more nouns are connected by "and."
13. *Errors in the pronoun in the objective case.*
14. **Agreement of pronoun with antecedent in gender, number, and person.** Simple case.
15. Agreement of pronoun with antecedent when the latter consists of two or more nouns in the singular number, whether connected by "and" or "not."
16. Agreement with a plural antecedent consisting of two or more nouns qualified by "each," "every," "no," or "not."
17. Agreement with antecedent consisting of two or more nouns, separated by "or," "nor," "as well as," or any other disjunctive.
18. Agreement when the antecedent is a collective noun.
19. **No antecedent.**
20. **Antecedent doubtful.**
21. *Errors in use of subjunctive mode.*
22. *Wrong use of or omission of "to" in infinitive mode.*
23. **Errors in tense, as "drunk" for "drank," "begin" for "began."**

24. Use of imperfect tense for perfect participle.
25. *Errors in use of "shall" or "will."*
27. *Errors in use of "lie" and "lay," "set" and "sit."*
28. Agreement in number of adjectives with nouns, when adjectives imply a unit or plurality, as "this" and "these."
29. Confusion of "each other" with "one another."
30. Use of "but" instead of "than" after "other," "otherwise," or "else."
31. *Use of adjectives when adverbs are required, as mean, meanly.*
32. *Use of adverb after a verb when an adjective is required; as, "the flower smells sweetly," instead of sweet.*
33. Use of superlatives when only two objects are compared.
34. Use of "them" for "those."
35. Use of "like" for "as."
36. *Confusion in use of "who," "which," and "that."*
37. *Use of two negatives.*
38. Use of "to what" instead of "to that."
39. Use of "but" instead of "that" or "if."
40. Misuse of prepositions.
41. Use of "between" for "among."
42. *In a sentence containing two or more words or two or more clauses, each of which requires a different particle to connect it with the conclusion of the sentence, the appropriate connecting particle must be used after each word or sentence.*
Violation of this. Illustration. He has made alterations and additions to the work. The word "in" should follow alterations. This is a very common error.
43. Use of superfluous words.
44. Abbreviations incorrectly used.¹

I tried in preparing the above scheme to cover all reasonable errors in speech, errors that most people were supposed to make in writing and speaking at one time or another. The errors in the scheme are indicated by

¹ Not considered in result because not a grammatical error.

description and number. The teachers were asked to indicate the errors by number and to make a list of the number of errors of each kind. Two errors of one kind were counted as two errors in the total, etc. I also urged the teachers not to consider the results in this work as a criticism on themselves, and I asked the fourth-grade teachers to consider their compositions from exactly the same standpoint, so far as the errors in question were concerned, as an eighth-grade or high school composition should be considered; that is to say, no allowance was to be made for the pupil's youth. I simply wanted to know what errors he committed, whether young or old.

These compositions were written and criticized, and the results were tabulated. The children furnished us with 2807 compositions and 8481 errors. The tabulation showed the number of errors of each kind for each grade and for all grades. I then subjected the figures to the following treatment. I found the percentage of each error in a given grade by dividing the number of cases of that kind of error by the total number of cases of error in the grade. I also found the percentage of errors of each kind for all the grades taken together.

A remarkable fact immediately developed, namely, that for sixteen kinds of errors there was no percentage of error at all. That is to say, there were either no errors or else there were so few as not to reach one half per cent. In the case of twelve kinds of errors there was a percentage of only one. I consider this

a revelation. There were only forty-three kinds of errors all told, and in twenty-eight of those the per cent of error did not reach $1\frac{1}{2}$; that is to say, in 65 per cent of the *kinds* of errors, the result was scarcely worth considering. Therefore the strength of the correction must be placed on only fifteen kinds of errors, or 35 per cent of the whole number. Here we get our first glimpse of the enormous waste of labor and time in teaching English grammar so far as its use in speaking or writing is concerned.

In this connection I cannot help referring to one fact in the investigation that brought to my face a broad smile. Notice error 42: "In a sentence containing two or more words or two or more clauses, each of which requires a different particle to connect it with the conclusion of the sentence, the appropriate connecting particle must be used after each word or clause." The illustration given of this is, "He has made alterations and additions to the work." The word *in* should follow alterations. When I issued my instructions I thought it necessary in this specific case to put the teachers on their guard, and so I inserted this warning: "This is a very common error." When the returns for the city came in, I found that in the case of error 42 there were just 47 instances out of a grand total of 8481. This shows how much I knew. It illustrated the wide gap between theory and experience. It is a type of what might be called *a priori* grammar teaching, which places the same amount of emphasis on all sort of errors,

when the facts easily ascertained show that many errors are not made by children.

I now come to the discussion of errors that were made. In Exhibit B I have arranged these errors in groups, so that their significance may be seen. The arrangement of groups follows generally the order of popularity of errors indicated in said groups. There are eight general headings. The first column indicates the number of the error; the second, a suggestion of the title; the third, the percentage of error; the fourth, fifth, sixth, seventh, and eighth, the number of errors made in each grade by each hundred pupils in each grade.

EXHIBIT B

CLASSIFICATION OF ERRORS

No. of Error	Error	Per Cent of Error	Grade				
			Number of Errors per 100 Pupils per Grade				
GROUP A			4th	5th	6th	7th	8th
2	Excessive use of connectives	. 16	66	43	52	27	10
GROUP B. SUPERFLUOUS WORDS							
43	Superfluous words	15	39	33	51	27	63
GROUP C. IMPERFECT SENTENCE							
5	Non-agreement of subject and predicate	8					
1	Subject or predicate omitted . .	6					
6	Compound subject connected by "and"	1					
9	Subject a collective noun	<u>1</u>					
		16	71	60	48	28	15

GROUP D. VERB

23	Errors in tense, "drunk" for "drank"	14					
24	Imperfect tense for perfect participle	4					
27	Errors in "lie" and "lay," etc .	2					
22	Wrong use or omission of "to" in infinitive	1					
21	Wrong use of subjunctive	1					
25	"Shall" and "will"	<u>1</u>					
		22	87	69	66	47	19

GROUP E. NOUNS and PRONOUNS

SUB-GROUP. ANTECEDENTS

14	Agreement of antecedent and pronoun	2					
20	Antecedent doubtful	4					
19	No antecedent	<u>2</u>					
	TOTAL ANTECEDENTS .	8	19	29	32	15	18

SUB-GROUP. POSSESSIVES

10	Possessive nouns	4					
11	Possessive Pronouns	<u>1</u>					
	TOTAL POSSESSIVES .	5	16	24	15	14	7

SUB-GROUP. MISCELLANEOUS

13	Wrong objective case, pronoun . . .	1					
36	Confusion of "who," "which," and "that"	<u>2</u>					
	Group E Total nouns and pronouns	16	43	64	59	37	31

GROUP F. PREPOSITIONS

40	Misuse of prepositions	5					
42	Varying of particle, etc	<u>1</u>					
		6	16	27	16	13	12

GROUP G. ARTICLES

3	<i>Wrong use of articles</i>	3							
4	<i>Unnecessary use of article</i>	<u>1</u>							
		4	16	13	13	11	5		

GROUP H. ADVERBS

37	<i>Two negatives</i>	1							
31	<i>Adjectives for adverbs</i>	1							
32	<i>Adverbs for adjectives</i>	<u>1</u>							
		3	7	8	12	7	7		

Group A refers to the use of long sentences, with extravagant use of connectives, 16 per cent. Group B relates to the use of superfluous words, 15 per cent. Group C relates to those errors that belong to the formation of the sentence. It includes four kinds of errors, and sums up to 16 per cent. Group D relates to verbs; the percentage is 22. Group E relates to errors in nouns and pronouns, 16 per cent. It is subdivided into three sub-groups, relating, respectively, to antecedents, 8 per cent, possessives, 5 per cent, and miscellaneous, 3 per cent. Group F relates to errors in prepositions, 6 per cent. Group G takes in errors in the use of the article, 4 per cent. Group H relates to adverbs, 3 per cent.

The errors are considered under three classes. Principal or essential errors are printed in full-faced type on both Exhibits A and B. Subordinate errors are printed in Exhibits A and B in italics. Errors not made at all appear on Exhibit A in plain type. They do not appear on Exhibit B.

Let us now examine these results a little in detail, and while doing so sketch a faint outline of a course of study.

Group A, the extravagant use of connectives, seems to me to be indicated as the proper point of beginning, not only by the evident popularity of that error, but also by good sense. As to popularity, the error supplies 16 per cent of the total. I have always taught that one of the first things to do in the teaching of grammar is to train the child to use short sentences. Then many of his errors are not possible. In oral and written work it is important to eliminate many of the connectives that children use. As I have already said, the well-known tendency of children is toward long, involved sentences, and this is the occasion of many of the grammatical errors and other crudities seen in the work of the pupils of the upper grades.

First, therefore, the pupils' involved sentences must be cut down to short sentences. I would keep at this until the end is reasonably attained, — and I know from experience that it can be obtained, — and afterward I would strike at the evil every time it showed itself. Suppose this is done. Is it not apparent that the danger of making imperfect sentences is very largely reduced? If a teacher should concentrate on this point for a good while, ignoring other points of grammar, is it not conceivable that in the course of a short time, say a couple of years, a good many errors would disappear of themselves? If it be objected that this would result in a jerky style, let the tendency of the pupil to unite sentences

be borne in mind. When the teacher takes off the pressure, the pupil will unite them fast enough.

The evil of superfluous words in a sentence (Group B) seems indicated as the next point of attack. The group furnished 15 per cent of the total number of errors. It ought to be said, in passing, that this is not, strictly speaking, a grammatical error. It is, nevertheless, so prolific a source of grammatical error that consideration of it cannot be left out in such a discussion as this. The tendency to superfluous words is obviously a matter that must be looked after continuously throughout the child's whole course. Yet I believe it can be so reduced that the effort during the latter part of the course will mean watchfulness on the part of the teacher, rather than specific teaching. And besides, the superfluous words that occur in young children's sentences are very frequently errors of grammar rather than of rhetoric, and are easily corrected. When we have accomplished a considerable elimination of superfluous words, I fancy we shall have done more. Many errors of grammar arise from the fact that the sentences are complicated and the child loses track of himself.

There are certain interesting figures concerning this evil, to which attention should be called. Look at Exhibit B, Group B, where the results are given. The figures under the Grades 4, 5, etc., indicate the number of errors per hundred pupils in said grades. Under the fourth grade notice that we have thirty-nine errors per hundred pupils; in the fifth, very nearly the same,

thirty-three; in the sixth grade, fifty-one errors, and in the eighth, sixty-three. The drop in the seventh is rather odd. The general trend of these figures teaches clearly a serious fact, viz. that we are making no progress at present in reducing this evil (superfluous words). There is a general increase from the fourth to the eighth grades. Even in the fourth grade the evil is not insignificant. It takes up 11 per cent of the errors in the fourth grade. I read the lesson thus: The work must be begun in the fourth grade, with the expectation that attention to the matter is to be constantly insisted upon. If this be done, and concentration guide the teacher's work, I cannot see why, when the sixth grade is finished, the evil may not be measurably overcome, requiring thereafter only vigilance.

If we add the two groups, A and B, do we not get something of a shock to find that 31 per cent, or nearly one third, of the errors in children's compositions, as actually found, relate to matters so simple, so easily corrected, and so vital? I cannot help thinking of Mark Twain's story of the man who was confined for ten years in a lonesome dungeon. Suddenly a bright idea struck him. He opened the door and walked out.

Let us now analyze Group C, which relates to the sentence. This group includes errors to the extent of 16 per cent of the total; but notice that two kinds of errors in the group alone use up 14 per cent of the 16. They are: first, non-agreement in person and number, subject and predicate (simple case); second, no sentence, subject

or predicate left out. Let it be noticed that these are errors in simple sentences. Now mark the other two errors, those in which there are complications. They are the non-agreement where the subject consists of two or more nouns or pronouns connected by *and*, 1 per cent, and the non-agreement when the subject is a collective noun, 1 per cent. Here are complications on which we have been accustomed to expend a great deal of energy. Altogether, the per cents foot up to the enormous total of 2. But there are other cases of non-agreement not indicated at all on Exhibit B, because the per cents footed up to 0. See Exhibit A. Such are errors involved when nominatives are connected by *or* or *nor* (No. 8), or when *each* and *every* are involved (No. 7).

I think in the consideration of this class of errors we have a flash light on the whole subject. Here, in Group C, is a total of 16 per cent in matters relating to the construction of a sentence, subject and predicate: 14 per cent relates to sentences simple in construction, and the other mass of errors to complicated subjects and predicates; the latter collection, to which we give so much of our valuable time, sums up to 2 per cent. I say, does not some such law as this concerning the teaching of language begin to emerge? First, see that your sentences are simple; second, concentrate your attention on simple considerations, and leave the perplexities to take care of themselves by and by, when you have cleared away the great mass of inaccuracy, and when the child has the brains to understand them. Is that not sensible? And

is it not fully justified by the figures I am now offering? If the child can form the habit of, first, always having a subject and predicate, and, second, of having that subject and predicate agree, the one with the other, in all simple cases, will he not have also formed a habit of general accuracy regarding the sentence, which will make it very easy to attend properly to complications when the time comes; and may we not, for the present, ignore such complications and leave them for a greater maturity of mind? Here are three propositions that this discussion tends to put in the light of facts: First, many errors are so complex that children rarely make them; second, when they are made, the children are so immature that they cannot understand the explanation when it is offered; third, if the errors could be explained, the pupils do not have practice enough in the said errors to enforce their correction.

The indication, then, for the course of study in this case seems clear. Take up the agreement of subject and predicate only in the two cases making up the 14 per cent, indicated by full-faced type, and ignore the 2 per cent.

I would concentrate on this subject until it is understood, — and so simple a consideration can be understood. I would dwell on it until it has become all but automatic to carry out the instructions. Then, when we have cut the sentences down, disposed of connectives and superfluous words, and made clear the simple elements in the construction of the sentences, we have laid the basis of teaching the rest of the grammar with absolute ease.

Every high school teacher and every upper-grade grammar school teacher knows that the serious weakness on the part of the children is the failure to recognize the sentence as a unit. The plan is to proceed from the sentence to its parts, and to study these parts only as constituents of the sentence. Every new acquisition is to be gained from the consideration of a multitude of simple sentences.

Notice in passing that there is involved merely a simple subject and predicate, and furthermore, not a modified subject or predicate. The subject and predicate may, and in many cases will, be modified; the point is that the teacher is to pay no attention to the modifications.

The teacher may then grapple with the three great considerations, noun, pronoun, and verb; and, I believe, they should be taken in the order named. But there are limitations. In the first place, consider the verb (Group D), see Exhibit B. Here are six kinds of errors. But there are great discrepancies. The total percentage involved is 23, and out of that as much as 14 per cent is taken up with such a simple consideration as errors in tense (*drunk* for *drank*, *begun* for *began*). Then we take a big drop down to 4 per cent, and come to the use of the perfect tense for perfect participle, which is very nearly the same error. Grouping these similar errors, we have 18 per cent. They are emphasized by being printed in full-faced type. Then we get down to the insignificant percentage of 2, in the use of *lie* and *lay*, *sit* and *set*. I confess that the fewness of errors of this kind surprises me. What will the elementary language books do if we

take out all the pages devoted to *lie* and *lay*, *set* and *sit*? The exhibit reaches bottom in three other errors, each registering 1 per cent. First, there is the wrong use or omission of *to* in the infinitive mode; second, the wrong use of the subjunctive mode; and, finally, errors in the use of *shall* and *will*.

Now for a moment consider the first two errors of this group (18 per cent), taking in the errors in the irregular forms of the verb, and consider that this is such a simple kind of error that it is easy to handle if we are disposed to concentrate. Are not results in sight when such a view of the case is taken? My suggestion is that this view be taken and that the verb be considered only in its relation to tense, and mainly in its relations to two of its tenses, the imperfect and the perfect, and to the participle.

In the case of nouns and pronouns, the subject of the next group (E), I note the following facts: The total per cent of errors is 16. I have divided this section into three sub-sections. The first relates to the antecedents of pronouns and takes in three headings: the agreement of pronoun with its antecedent, antecedent doubtful, no antecedent. Total, 8 per cent. The second relates to the possessive of nouns (4 per cent) and pronouns (1 per cent). The next two considerations relate to the form of the objective, 1 per cent, and the confusion of *who*, *which*, and *that*, 2 per cent. Let us select from the whole group the sub-group of antecedents as one essential, and the possessive nouns as another, ignore the rest, and go on. The question of the antecedent of pronouns, often

quite difficult, is not very difficult if we wait, probably until the sixth grade is reached, and if the ground is prepared so that we may concentrate on this point.

The sixth group, F, relates to prepositions. It takes up 6 per cent of the errors, of which the misuse of prepositions covers 5. The other 1 per cent refers to the varying of the particle in a sentence containing two or more words, or two or more clauses, each demanding a different particle. Correct the 5 per cent item. Ignore the 1 per cent.

The subject of prepositions belongs, I consider, to the latter part of the sixth grade, or to the seventh. It is a difficult subject, even for older pupils. It is always an interesting subject, if it is properly conducted. The most that a teacher can succeed in doing is, I think, to get into the pupil's head the idea that there is a difference in force in the use of prepositions, and to induce him to think of it. The control of this matter is a pretty late development.

We come down very low in the next group, G, which relates to errors in the use of articles, 4 per cent, including the wrong use of an article, 3 per cent, unnecessary use of article, 1 per cent. I should say, pay no attention to this group, or the next and last, which can muster but 3 per cent of errors. This is the adverb group, and includes the dreaded double negative, and the unpardonable sin of saying "badly" for "bad," and the reverse. Is not a bugbear suggested?

It will be borne in mind, I trust, that I am confining

my attention to grammar. The earliest attention of a teacher, of course, should be given to matters that relate to the form of the composition, say margin, indentation, the beginning of a sentence with a capital and terminating with a period, and the capitalization of pronoun *I*. I think that these matters should be insisted on, at first, to the exclusion of considerations of grammar.

Let us now sum up. According to the showing of this investigation, there are just seven questions in grammar that should occupy the teacher's attention as far as correction of speech is concerned; the excessive use of connectives, 16 per cent; the use of superfluous words, 15 per cent; the relation of subject and predicate, 14 per cent; errors in tense involving the imperfect and perfect for the most part, 18 per cent; considerations relating to the antecedent of the pronoun, 8 per cent; the possessive of the noun, 4 per cent; and the misuse of prepositions, 5 per cent. Total, 80 per cent, leaving 20 per cent of errors scattered variously through fifteen other considerations. Are not the limitations of the field and the character of the errors that make up the 80 per cent instructive, not to say startling?

Here are the points of grammar that would be demanded: Conjunctions (copulative only); subject and predicate; perfect, imperfect, and present tenses of verb; relative pronoun in relation to antecedent; possessive nouns, prepositions. Here are six elementary considerations of grammar on which if we place careful and concentrated attention we shall clear up 80 per cent of the errors.

Let no one say that to teach these matters we must also teach the other facts of grammar in order that we may understand them. Every teacher knows that, except to a very trifling extent, such a statement is not correct. It is not necessary to teach mode to understand tense. To teach the imperfect tense of a verb it is simply necessary to teach the verb and then the tense. It is not necessary to teach the objective to understand the possessive. Some one may say that it is necessary to teach proper nouns in order that we may teach capitalization. Is that really so? Cannot we say that the name of a person or a country should begin with a capital without teaching grammar? In a word, simplicity in teaching is imperative. Grammatical principles must be taught. They are best taught when too much is not attempted. It is not a question of how much ground is covered, but a proper selection of material and of emphasis.

How much of a book could be made out of the seven considerations presented by this study, involving the aforesaid six elementary considerations in grammar? Let each teacher make such a book, with proper development and sufficient number of exercises; the book will hardly be thick enough to make it worth any publisher's while to publish it.

How much grammar is left out? It would try the patience of any reader if I should answer this question. In the Trenton course of study, which I issued, I wrote as follows: "The pupil when he reaches this [seventh] grade should be able to recognize the parts of speech and

should know simple definitions. He should know the modifications of the noun, pronoun, and verb (except modes, tenses, and voice), and the functions of the adverb, adjective, preposition, and conjunction; he should understand the construction of a simple sentence and be able to analyze it, and should understand the compound subject and predicate." I thought when I wrote this paragraph four years ago that I was exceedingly conservative, but the paragraph makes me smile. There is scarcely a statement in it that is not contradicted by the present paper. If the conclusions of this paper are to be trusted, it is not necessary to recognize the parts of speech and to know the modifications of a noun, pronoun, and verb, nor the functions of the adverb and adjective, nor the compound subject and predicate; and in the same paragraph where I have said it is not necessary to understand tenses, I must now say it is necessary to understand two tenses. So much for theory.

Another illustration is the following paragraph (sixth grade); it reads as follows: "Teach the modifications of noun and pronoun; person, number, gender, and case. Teach nouns as common and proper. Teach the classes of pronouns. Drill in the use of *who*, *which*, *what*, *whose*, and *whom*, with reference to the errors made in their use." If I had to write that paragraph again, I think I should observe the language of bills introduced in the Legislature to dispose of certain laws. They do not attack the body of the law. They simply strike out the enacting clause. The paragraph is all

right if, before the word "teach," you insert the words "do not."

It may be objected that in the foregoing sketch of a course of study my order of introducing what I have styled the essential errors is arbitrary. It may be somewhat, but not absolutely. I offer figures. Look at Exhibit C. The per cents there given are found by dividing the number of errors of a given kind in a grade by the whole number of errors in that grade. Notice that I have

EXHIBIT C

GENERAL CLASSIFICATION OF ERRORS WITH PERCENTAGES

See Exhibit B. (Error 43 not included.)

I. ESSENTIAL ERRORS.

<i>First Class</i>	<i>Connectives</i>	<i>Grade</i>	4	5	6	7	8
a. Extravagant use of connectives . . .			20	13	16	14	6
b. Two errors in sentence formation (5 and 1)			18	16	12	11	7
c. Two errors in form of verb (23 and 24) .			22	15	14	19	10
Total per cent			60	44	42	44	23

Second Class

a. Antecedents	5	8	10	8	11
b. Possessive nouns	4	6	4	6	4
c. Prepositions	4	7	4	6	6
Total per cent	13	21	18	19	21

II. SUBORDINATE ERRORS. (All on Exhibit B except the above and No. 43. Fifteen errors.)

Total per cent	15	23	18	20	16
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considered in this exhibit: (1) essential errors, those we have just been considering (the full-faced type errors of Exhibit B), and (2) subordinate errors, namely, the errors in italics on Exhibit B. I desire to confine your

attention to (1). I have subdivided these errors into two classes, each containing three kinds of errors. Notice that I can do so, because even in the so-called essential errors there is a very clearly marked dividing line expressed by the figures. So far as percentages go, the three members of each section belong where I have placed them. The figures in the first class are generally large and in the second generally small.

I think that two important considerations emerge from an inspection of this table. First, the popularity of error is all on the side of the first class of errors, and I have assumed that popularity of error should be an important indication in determining the order in which error should be taken up, the purpose being to get the great mass of error out of the way.

My second consideration involves a rather curious inquiry. Notice in the first class of errors, considering total per cents, that there is a general diminution of error as you go up the grades. The diminution is irregular (and this irregularity will come up for consideration at a later stage in this discussion), but the drop is clear and positive. But in the second class there is no gain. There is a loss. We jump from 13 per cent in the fourth grade to 21 per cent in the fifth grade, and there we practically stay. Let me offer a theory to explain this striking condition of things. In dealing with the first class of errors, we are successful in part, even under present methods of teaching, and that fact shows that such errors lend themselves easily to treatment. The

presumption is, therefore, that if we concentrate we can do much more. I think that is a fair inference. But in dealing with the second class of errors, note that we make no progress. If we made a little progress, we could hope that with concentration such errors would admit of treatment. But we lose ground. The inference would seem to be that here is a class of errors to be postponed to a more advanced stage of development, and to a time when we shall be free to take them by themselves. At least it seems reasonable that a class of errors that evidently admits of treatment should be considered earlier than a class where the possibility of treatment is very much less evident. I think that this table goes far toward justifying my order of treatment.

Now for the subordinate errors, the 20 per cent of scattering errors that occur in the groups of Exhibit B, which I have been discussing. They are the italicized errors.

Can these errors be ignored? I answer unhesitatingly, as far as formal teaching is concerned, yes; and I make this answer in the interests of concentration. There may be correction of such errors, of course, but it should be of the most incidental character, not as a rule to be learned nor as a fact to be accounted for. Would I let the pupil go on making mistakes in such matters, as, for instance, the number of the verb, when the subject is compound, or the double negative, or *lie* for *lay*? Yes, that is precisely what I would do. Recall, by way of illustration, this sage suggestion from experienced teachers

in the matter of discipline: "Do not see all the wrong things that are going on in your classroom; be conveniently blind sometimes." There are some teachers who note everything. There are other teachers who see everything, but do not look at everything. The wise teacher sooner or later ranges himself in the latter class. He knows that many things will correct themselves and do not need his attention. Here we have a principle that holds good also in the acquisition of learning, a principle that many and many a teacher does not know; namely, that there are many things that children will learn without anybody's help. Dr. J. M. Rice, in his excellent essay on spelling, makes this very sage remark: "There are many words belonging to maturer years, easy to spell when the time for their introduction occurs." Why is this not true as regards grammar?

Again, teachers leave out of account this great principle that there is such a thing as a trained power of observation, that in teaching any subject there ought always to be two requirements, one the facts, and the other the power of acquiring facts by one's self. For instance, referring to spelling, the teacher errs if he expects a child to learn in school all the words that he is ever going to use. Every rational teacher knows that a comparatively limited vocabulary is the outcome of the school course. Subsequent acquirements are to grow out of a trained power of observation. This means that the power of taking in the image of the word rapidly and accurately must be acquired. If this end be attained, the actual

vocabulary of the pupil is a subordinate matter. He then has the power of accurate seeing, and the accurate power of expressing what he sees. Now, in language, whether English or French, the same psychological state of things exists.

Again, in teaching one thing, we unconsciously teach another; that is to say, in all good teaching there is a tendency to accuracy and even to a knowledge that exists beyond the thing taught. I quote again from Dr. Hill, who very felicitously described this phenomenon as the "gracious overflow." If one exercises his right arm for three months, and neglects his left arm, he will find at the end of that time that while his right arm has made a great gain in strength his left arm has also made some gain. The same principle holds in intellectual activity. To our surprise, we often find that matters that we have not taught at all, but that have some similarity to matters that we have taught, are just as well acquired as the latter class.

Therefore, I am optimistic and look for a constant diminution of these subordinate errors as a result of what I may describe as incidental teaching. I believe, for instance, that the double negative, of which we have 1 per cent in our eight thousand, five hundred odd errors, could be all but extinguished, and that *lie* and *lay* would settle themselves, not through teaching, but through suggestion, if a *habit of mind toward accuracy in essentials* could be formed, a thing that I have claimed is the most important outcome of teaching. This, of course, is a theory.

But the teacher of grammar is now a theorist, and often a hopeless theorist. If existing theories came out anywhere, we might urge them with more confidence. But look at Exhibit C. In the last line all these subordinate, non-essential errors now under discussion are grouped. In the fourth grade they furnish 15 per cent of the errors, and in the eighth, 16 per cent. In the intervening grades the percentages are higher. No great success here, is there? We could not do much worse.

But the principal answer to the contention of the teacher that these subordinate errors, as well as the more important errors, must be taught specifically is this. The facts show that children do not make these errors, that is to say, they make them so seldom that there is no opportunity to give requisite practice in their correction. What is the use of correcting an error that a child does not make? To give the requisite practice we must get up a very artificial state of things and bring about these errors. Is that a very philosophical course of procedure? I mean this, that we must not only have precept, but example, and it is just as bad pedagogy in the teaching of language as it is in the teaching of morals to suppose wicked things for the sake of correcting them.

One more consideration at this point, which, perhaps, will allay the fears of the hypersensitive teacher who cannot pass over a single error. If errors are made so seldom that we do not get any chance to correct them, they are not made often enough to form a habit, so it is as well not to worry. Seriously, this word "habit" is

the keynote to the whole discussion. The purpose of teaching grammar, as far as its use in speaking and writing is concerned, is to break bad habits and to prevent the formation of new ones. Bad habits need practice, and if practice is impossible, the habit, at best, is improbable.

But what shall be said of the errors that were not made at all, or were made so seldom that their use did not reach one half per cent? In Exhibit A these errors are indicated in plain Roman type. They do not appear in Exhibit B. Look over the list. It is appalling.

But we must drop lower still. Much of the time spent in teaching grammar is given to considerations in which error is impossible. In the foregoing discussion we have considered errors as probable or improbable, but in all cases they were errors. In much grammar teaching, however, the considerations do not admit of the possibility of error. Prepositions govern the objective case. In Latin, or German, the government by the preposition is a serious matter, but what about the English noun? Is it possible to make any errors? This is an illustration of a large class of considerations, which take up much of our time. They relate to matters concerning which the child could not make an error if he tried.

I now ask attention once more to Exhibit B, in which an important consideration is indicated. Look at each group and compare the column headed Fourth Grade with the column headed Eighth Grade, and notice the figures. These figures indicate the number of errors per hundred pupils in each grade. In Group A, considering the ex-

cessive use of connectives, we have sixty-six errors per hundred pupils in the fourth, against ten in the eighth. Here is a large reduction; but does it not seem that this error should have been extinguished by the end of the sixth grade? Is it not a comparatively simple error? In the other groups the showing is worse (the sub-group of antecedents, for example). In Exhibit D I have brought

EXHIBIT D

A SUMMARY OF ERRORS TO SHOW THE PROGRESS OF THE GRADES

I. Consideration of six of the seven essential errors. (43 omitted. See paper.)

	<i>Grade</i>	4	5	6	7	8
No. of errors per 100 pupils		253	215	202	126	71
Same reduced to a basis of 100 as a						
grand total		29	25	23	15	8

II. Consideration of all errors except 43 and 44.

	<i>Grade</i>	4	5	6	7	8
No. of errors per 100 pupils		312	292	277	177	101
Same reduced to basis of 100 as grand						
total		27	25	24	15	9

together the errors under the headings that I have classed as essential, excluding the errors under the heading of Superfluous Words, Group B. I exclude this group because, as I have stated, the error is not one of grammar, although a prolific source of grammatical error; and to ascertain the degree of success attained in extinguishing grammatical error it is necessary to consider the errors by themselves. Taken from this point of view, the figures per hundred pupils are as follows (see Exhibit D, I): Fourth grade, 253; fifth, 215; sixth, 202; seventh,

126; eighth, 71. Bringing these to the basis of 100, the following figures result: 29, 25, 23, 15, 8. There is seen, therefore, a steady reduction in error from beginning to end; but it does not seem like a very great triumph, when in the eighth grade, considering errors in fundamental considerations only, there are still nearly one third as many as there were in the fourth grade. Surely in these simple considerations we should have reached extermination. Why have we not reached extermination? Because, I reiterate, we have spread our effort over too wide an area. We have not concentrated.

But suppose we take all the errors of Exhibit B, little and big, leaving out again the superfluous words (see Exhibit D, II); then, on the basis of 100, the relations would be 27, 25, 24, 15, 9. It will be seen here, comparing the fourth grade with the eighth, that we have made a reduction of just two thirds, not so much, indeed, as when only essential errors were considered. It is apparent, therefore, in attempting to do so much, we have not succeeded in the essentials, and we have succeeded even more poorly in the non-essentials.

But the principal fact that I deduce from these last figures is this: I refer to I in Exhibit D. If we can get from twenty-nine in the fourth grade down to fifteen and eight in the seventh and eighth grades, why could we not by concentrating on the essential errors entirely exterminate them so as to leave, in the seventh and eighth grades at least, zeros, so far as these essentials are concerned? I believe that it could be done. If it could, behold

a twofold outcome: first, the seventh and eighth grades are left clear for the teaching of grammar as a science; and second, we have obtained a trained habit of accuracy in expression and a studentlike attitude toward grammar. To these may be added a third, which is probable; namely, a more kindly state of mind. That is to say, the student has not yet learned to hate grammar, and if it is properly manipulated in the seventh and eighth grades, I see no reason why he should hate it there. To tell the truth, I am a little doubtful about the seventh grade. I should favor taking up the subject in the seventh, if at all, in a very extensive way, leaving the more intensive treatment to the eighth grade; how intensive we have no means of knowing. You see, this is a plea rather for the study of grammar than for the neglect of it. I think the high school teachers have a right to demand this preparation, but they will never get it as long as we muddle the subject as we do.

I am still doubtful concerning the formal study of grammar before the child reaches the eighth grade, and I hope that this study may throw a little light on the time for beginning such formal consideration of the subject. Here are the figures that seem to bear on the subject. Notice, first, a peculiarity in Exhibit D. In I the number of errors per hundred pupils drops from 253 to 126 in passing from the fourth to the seventh grade, a drop of one half; when we pass from the seventh to the eighth grade, we drop from 126 to 71, again about one half (44 per cent). In II, where all the errors of

Exhibit B are considered, the drop from the fourth to the seventh is 43 per cent, and from the seventh to the eighth, 43 per cent. You see that, even under present conditions, we make in one year, from the seventh to the eighth, the same progress as in the three preceding years taken together. This condition of things may have two explanations; either the teacher is teaching more grammar in the eighth grade or the mind has become ready for it. I do not ascribe this phenomenon to the former cause, at least to any great extent, for these reasons: first, my test was taken in January, when the eighth year was not half gone; second, the teachers had been teaching more or less grammar right along in the other grades; third, it is contrary to experience that what a child learns in his grammar lessons should appear in his composition. I am disposed, therefore, to look on these figures as indicating the eighth grade as the proper time for beginning the study for formal grammar. The figures do not prove this proposition, but they give it a strong probability.

Indeed, is not a suspicion forced on the mind, from a general consideration of the figures of Exhibit D, that our present methods in grammar take little account of the fact of the child's mental development? Even with the present methods, ought we not to accomplish more than we do? We have skillful teaching, and our teachers work hard enough. I suspect that if these figures that I am offering could speak, they would say, "You are taking up the consideration of difficult matters before the

mind is prepared for them ; you therefore fail and must fail." But it does not seem to be a bold assumption that the simple considerations, which the results of this study indicate as essential, are probably not in advance of the condition of a child at the time he must be taught. I believe that, in limiting ourselves to such considerations, we would be obeying the indications of nature at the same time that we were wiping out the 80 per cent of error.

What about the language books that are issued in such great numbers? I do not know. I suggest to the teacher to take a blue pencil and open one of those language books, and, in view of what I have offered, see how much she can do with that blue pencil. Yet I believe in a language book, and I have, for years before I made this investigation, had it in my mind to try to write a language book on the basis of such an investigation as this. Now that I have made the investigation I feel more like it than ever, but I suppose I shall never have time to do it. I hope some one else will.

It may be urged that all the findings of this investigation would be altered in getting results from schools in which there is a large foreign element. I have had some experience with a large foreign population since I made this investigation, and I have found out that their errors are all their own. Nevertheless, I believe there comes a time, even in the case of a foreign child, when the considerations to which I allude will apply. Besides, I am discussing English as a vernacular, and not as a foreign language.

I have spoken of seven considerations. That is a small number, but it will prove to be a very large number if the teacher tries to teach them all at once. I reiterate, in closing, the word which I have used many times in this study, and which should be the slogan for all teachers of grammar, and, indeed, of everything else, "concentrate." To correct everything is pedagogically wrong. It distributes the child's attention over many points, and gives close attention to nothing. It is far better pedagogy to concentrate attention on one error until that is disposed of, conveniently ignoring all others. Bear in mind that mental processes can become reflex just like physical processes.

May I paraphrase an ancient saying, and say again that the grammar was made for the child, and not the child for the grammar?

CHAPTER XVI

HISTORY

PROPERLY taught, history should reveal man's relationship to his neighbor, to his country, and to his race. It affords fine opportunities for moral development, and for revealing the consciousness of higher citizenship. It is one of the most effective subjects for training pupils to think truly in regard to great national questions, and their relationship to everyday life. It relates man's progressive steps toward a higher civilization, and should be a guide toward still higher conditions. It should arouse a deeper and more vital interest in literature and geography.

History should be based on biography. A consecutive history of the world's evolution might be prepared by writing the lives of the great leaders of the successive epochs. Young children are deeply interested in the stories of the lives of real men and women. Even in the lowest primary classes, these stories should be told to the children. In addition to these, such stories as the Greek myths, Robinson Crusoe, and Hiawatha, lay foundations and arouse apperceptive centers for historical interests in the minds of the very young. These should be followed by such stories as those of Joseph, Moses,

David, Esther, William Tell, Alfred the Great, Bruce, Columbus, George Stevenson, Horatius, Captain Cook, Shakespeare, Napoleon, Lord Nelson, Cromwell, Washington, Luther, Watt, the Pilgrim Fathers, the Early Pioneers in America, Paul Revere, Daniel Boone, the Retreat of the Ten Thousand under Xenophon, etc. With the minds of the pupils stored with stories of epoch-making men and women, it is easy to arouse a deep interest in the history of their periods, and of all related periods. These stories retold by the pupils give excellent training in language, whether told orally or in the form of composition.

The great mistake in teaching history in the past has been to regard it chiefly as a record of wars. Stories of national quarrels, of battles, of sieges, of the destruction of life, — these have been the leading themes of historical textbooks. Too often the great purpose of the teacher has been to drill the pupils on names, and dates, and records, to the neglect of the great fundamental principles that underlie history. This degradation of history has resulted from the fact that school children had to pass examinations in history. Great as are the evil effects of final examinations in lowering the ideals of teachers, parents, and children in regard to the real meaning of education, there are few subjects that are robbed of interest and of truly developing power by examinations as completely as history.

History is a subject that should be continued throughout life after school, college, and university life are over.

The school can merely arouse an interest in the subject, and train in its independent study. Dr. Arnold said that the purposes of the teacher in teaching history should be: (a) "To convince the pupils that history contains gold"; (b) "To train them to dig for it."

The usual practice in schools is to supply each pupil with the same textbook in history, and to assign lessons by chapters or by a stated number of pages. This is the study of a book, not an intelligent effort to arouse interest and to guide in study, so as to form the habit of individual investigation. Again, the primary cause of the wrong practice has been the fact that the examinations were regarded as of such importance, and that they were based on the one authorized textbook. When the pupils are old enough to begin to study history, it is better to have them use as many different histories as possible, provided that they are properly prepared. The ideal would be that each pupil should study a different history, and compare notes in the classroom under the leadership of the teacher, if enough good histories could be found.

It is a common practice for the teacher, in assigning a new lesson in history, to give notes of the facts and events to be committed to memory. This course does not develop the power of independent investigation on the part of the pupils, nor does it train them to decide which events of the period deserve their most careful study. The study of history should train the judgment, and not merely the memory. The pupils should be asked to

study a period, to note the great events of that period, and to record them in the order of importance in their own judgment, with their reasons for ranking them in such an order in relative importance. Such a course of training will develop the judgment of the pupils, their faith in themselves, their interest in the subject, and their individual power to study history profitably. It will "train them to dig for the gold." The class discussions in which different pupils give their reasons for considering some events as of greater importance than others will give clearer ideas regarding the value of historical study than can be communicated in any other way. Such training will arouse a permanent interest in historical study, and will also qualify for systematic study through life.

When a period has been studied, it is a good plan to ask the pupils to select the one leader of the time whose work was of most importance to his country and to the world. To do this and to prepare to give reasons for the choice made will contribute definitely to the development of the pupils, and will prepare them for the more thorough study of any subject in school or during after life.

In the higher classes pupils should be led to use the public libraries where there are any available, in order to get more clear and more comprehensive ideas in regard to historical matters. Differences of opinion in regard to many questions are sure to arise in the classroom. In such cases it is an excellent plan to appoint a small committee on each side to read the best authorities in the

public library in regard to the questions under discussion, and to report to the class at a later lesson. Sometimes it is advisable to ask every pupil to read up on the debatable subjects, not only in the public libraries, but in their home libraries. The habit of using a public library regularly may be of much greater advantage than the study of history.

In such a plan of studying history independently it will be found that the topical method of teaching and studying will be a most excellent one. When events and principles are presented in chronological order, they are certain to be confusing to the child's mind. He will not be likely to gain a definite view of the complete evolution of any of the great elements of human progress as revealed in history. If constitutional advancement, and national expansion, and religious culture, and educational progress, and literary development, and social changes, and industrial and commercial expansion, and the overthrow of tyranny, and the wider recognition of individual rights and human liberty, be mixed up in a sort of historical hash by the teacher, the pupil fails to get a clear grasp of the value of any of them, or of their relationships to each other, or to higher citizenship. This is especially true, if these vital elements are subordinated, as is too often the case, to wars and intrigues. A merchant requires more than his day book to understand his business. He needs his ledger to comprehend his various accounts and departments, and their relationship to each other. So, in history, the leading departments of

a nation's real life should be studied separately through a century, or a period, or through the entire history of the nation, in order that pupils may clearly understand the progress made in each department, and its relationship to all the other departments of national life in their progressive development.

When one topic has been followed carefully through the lifetime of a nation, the study of each successive topic becomes more easy, and more illuminating. Each new topic necessarily reviews the work of the former studies, not in the form of simple repetition, which too often passes for reviewing, but in essential relationship between the old and the new, which is the only truly psychological process of reviewing.

To make the study of history really practical, it should be associated with civics and government.

When the history of the United States has been studied down to the present time, it is a good plan to begin with present conditions of development in government, in freedom of the people, in social conditions, in industrial conditions, in education, and in other departments of national life, and to trace them backward, noting the epochs of chief transition to higher and better conditions. A student knows the history of his country truly, when he has followed it topically from the beginning through its growth processes to the end, and then reverses this process and looks backward from the present to consider the steps in the progressive sequence that led to present conditions. We understand the past in its relationship to

the present. We comprehend the present more fully when we know that it is the logical outcome of the past. The clearer knowledge of the past and the present should qualify us to do our duty more truly in the future.

CHAPTER XVII

BASIC PRINCIPLES

THE underlying fundamental principles on which the methods advocated in the preceding chapters are based are :

1. That the self-activity of the child is all-important.
2. That achieving power, rather than mere memory-storing, should be developed.
3. That children should be trained so that they may act quickly, correctly, and definitely under new and varying conditions.
4. That knowledge itself is not power.
5. That the child himself naturally possesses power that may be developed, and that the chief work of schools should be to aid the child in promoting his best development along his especial power.
6. That knowledge related both to culture and to practical life should be taught to the child.
7. That all teaching is weak, if not positively evil, that weakens the individual power of the child by the processes used in communicating knowledge to him.
8. That all educational processes based mainly on the direct development of the child's memory are ineffective, even in the development of memory itself,

and useless in the cultivation of real individual executive power, if not destructive of such power.

9. That the true test of education is not how much a child knows, nor merely what he can do, but what he can do coupled with a well-defined tendency to do.

The vital principle of self-activity was so completely ignored by the old methods of teaching, that a child who had been controlled from birth till he was twenty-one years of age by these school methods would have possessed merely a feebly receptive brain instead of a definitely and creatively executive brain. The achieving and independently executive minds developed under the old training were not developed in the schools, but on the playgrounds, and in doing the work of the home and the farm. Very few of the American leaders of the past two centuries were leaders because of what they learned at school. Statistics prove that nearly 70 per cent of the leading ministers, lawyers, doctors, bankers, and merchants in the great cities of America at the present time were brought up on farms, and had to work for a living, so that they were allowed to go to school during the winter months only. It was not what they took in, but what they wrought out, that made them capable of leadership in the work of the world. The schools of a hundred years ago made men receptive only. Fifty years ago teachers began to try to make students reflective. Now good teachers aim to make their pupils not only executive, but independently executive.

Many teachers at the present time are satisfied with

activity on the part of their pupils. They are only half awake; they have only a part of the great, true, educational vision. Activity, even in response to the teacher's suggestion, is infinitely more developing to power, skill, and character than learning of any kind could possibly be, because it makes pupils productive and constructive; but self-activity makes them creatively and independently constructive and productive.

Self-activity includes the motive and the directive power of the child himself. There is no other test of the teacher's work either in the learning or the productive activity of a child that is so comprehensively revealing of the real progress made, as the self-activity of the child. Teachers usually do too much themselves in the work of the school. The greatest teachers are those who learn to kindle each child at the center of his power, and who guide him in the proper use of his powers in study and activity in productive achievement.

The greatest aim of a teacher in securing her own improvement should be to discover new plans by which she may provide more fully for the independent self-activity of her pupils in learning and in achieving.

The great purpose of education has been memory-storing with facts either told by the teacher or studied in books. Facts in themselves are of little culture value, and of less practical value as long as they are merely learned. Even principles do not transform character, if they are merely committed to memory. Principles become dominant elements in character,

when they become the basis of habits; and habits are formed by what we have wrought out by life processes, and not by what we have learned or simply thought out. To commit the most comprehensive catechism to memory may not even define clearly in the mind the moral principles it is intended to expound; and even when moral principles are clearly defined in the mind, they do not become dominant elements in character by remaining in the mind. They must be wrought into life by self-activity, not merely imitative activity, before they become conscious parts of moral character.

The new education will not be a mere book education. Books will always be an important part of education, but the effort will be made more and more to train pupils to love books and to study them, instead of making the books the basis of success in gaining marks at examinations. The old education classified pupils into the clever and the dull. The clever pupils were those who easily understood book learning, and rapidly committed it to memory, and remembered it long enough to repeat it at examination. The dull were those who were not interested in book learning, and who were not successful at examinations based solely on books. We are learning rapidly now that most of the brightest pupils were not intended to find their deepest interest in books. Teachers wondered for generations why so many of the so-called dull pupils became the most successful men and women, and why so many of those who stood highest in class and at examinations became mediocre men and women

when tested by life. We are learning now that productivity is more important than receptivity. We are finding, too, a broader test for an educational system than examinations, and a truer basis for school work than books alone.

Knowledge is not power. The power lies in the child. Knowledge becomes power when it is wrought into the achieving power of the child, and used as an element in the child's reason, not merely to train him to think, but to guide him in action. Knowledge becomes power only when used by the selfhood of the child; and knowledge increases in power as the achieving power of the child increases.

The primary aim of the school should be power development, the secondary aim, knowledge. In most schools as yet, the chief aim is knowledge, and the methods of communicating it have aimed at the growth of one power — memory. Recently a few schools have tried to remember a little in the teaching of a few subjects that children should be trained to think. It is not enough, however, to train a man to acquire knowledge and retain it, and to think accurately in regard to it. Efficient service for humanity, for the community in which he lives, demands the development of achieving power. This is the only power that gives real value to the ability to acquire knowledge and to think clearly. There are thousands of inefficient men and women in every community, who have power to get knowledge from books, and from men, and who have their reasoning powers fairly developed.

They are inefficient because they were stored instead of developed in school.

To develop the achieving and transforming powers of children will not necessarily take time away from the important studies on the school curriculum. If children had proper facilities for developing their constructive powers, their intellectual powers would improve much more rapidly than they can possibly improve by study. The child's brain is developed and coördinated more rapidly and more comprehensively when it is used to plan and to guide in the execution of its plans, than when it is merely required to acquire knowledge, to understand, and to remember facts or principles. The common processes of learning develop only certain limited areas of brain power, the least important elements of brain power in the making of efficient citizens.

One of the real tests of the value of school education is its influence on the alertness of mind that is necessary to see the various factors that make up new conditions; on the power of recognition of the relationship of the elements of the new conditions to each other, and to the familiar conditions of past experience; and on the quickness of decision and of execution necessary to make the best of the new conditions. The man who most quickly and most completely sees the relationship of new conditions, and the way in which they may best be improved, becomes most surely the leader of his fellow-men, and a most efficient member of his community. Formerly the

development of quickness of mental vision, promptness in decision, and immediate achievement were not even considered as a part of school work. Such elements of power and character, supremely important though they be, are still left to be developed mainly on the playground or in other incidental or accidental ways outside of the school.

The schools will some day provide means for developing the child's natural powers. Each child should pass through such conditions in school as will enable him to gradually become conscious of his highest power, and reveal it to his parents and teachers. His special interests may change, should change, in most cases, from year to year during his early years, but all the essential elements of his achieving power should continue to develop throughout his whole school course. The revelation of his especial power can be made only by operative processes. When it has been revealed, it is the most vital element to aid him in deciding what his life work should be, and to qualify his parents and teachers for giving him reasonable advice in regard to this most important subject.

Some day the national schools, coöperating with Young Men's and Young Women's Christian Associations, and committees appointed by commercial organizations, will establish offices to aid in finding suitable positions for the young people who graduate from the school to the productive departments of the world's work. Some day the various institutions that should be effective in

deciding the destinies of children, and in qualifying them for the greatest success, will be coördinated, and then development and destiny will not be so indefinitely related as they are at present.

One of the most manifest of the weaknesses of the educational systems is that they are planned and conducted in the interest of the comparatively few who have money and brain quality to enable them to proceed to take the full culture courses provided. Educators have proceeded on the theory that the elementary schools should provide exactly the same courses of study for all types of children. They must learn that the great masses who are to fill places in the industrial and commercial world, especially in the industrial world, should be trained in the elemental principles of their life work early. Indeed, it would be much wiser to provide, for all children in the elementary schools, a system calculated to develop the masses of the children in the processes best calculated to prepare them truly for their life work, than to give all children the training assumed to be best for the few who are likely to take the higher culture courses in high schools and universities. Educators are now beginning to recognize the fact that many pupils who enter high schools are really weakened instead of strengthened by their high school courses. This has led to the establishment of special kinds of high schools, and of vocational schools. It cannot be long before there will be as complete and as well-organized a course from the kindergarten to the university in practical education

as now exists for culture and preparation for professional life. All who are to enter practical departments of life will not proceed to the technical work of the universities. Those who should be the leaders in the industrial and technical world should proceed through the universities so that they may understand the scientific basis of the work they expect to supervise, and may receive at the same time a practical training in the most modern processes of accomplishing the best results in their chosen vocations.

No child is truly educated unless he has been trained to produce and achieve, and has the tendency to produce and achieve well developed as the true basis of his happiness and of his moral evolution as a member of society.

APPENDIX

ANALYSIS OF FROEBEL'S EDUCATIONAL PRINCIPLES

THREE PRINCIPLES

1. *The Divine Essence* (possibility). Individuality.
2. *Self-Revelation* (consciousness of possibility).
3. *Self-Activity* (freedom to develop possibility).

NOTE. — The real child (essence) is the divine part. To speak of a child as essentially bad is, from Froebel's point of view, a contradiction of terms.

Education is the evolution of the divine essence (possibility) by making a child conscious of possibility and leaving him free to develop it.

SELF-REVELATION, THE ADJECTIVE "CONSCIOUS"

A. Subjective View.—*a.* Consciousness of power necessary to the development of possibility (divine essence), therefore necessary to adequate education.

b. Consciousness of failure, a hindrance in education.

The teacher usually develops consciousness of failure.

B. Objective View.—The child must not only know his power, but must know that the teacher knows it.

NOTE. — The same principles are applicable to the teacher. She must know her power, and for her highest success must know that it is recognized.

c. Supplementary considerations illustrative of the general necessity, viz.: that the child must be made conscious of power, not of failure.

I. *Rewards of merit* should be given on basis of efforts, not of attainment. Otherwise consciousness of defeat evolved.

Recognition of effort results in highest possible attainment.

NOTE. — Principle of Ratio, *i.e.* Attainment, is to be considered in view of the possibility.

II. *Promotions.*

Usual rigid plan ignores the child's possibility in a given subject. The standard in each child's subject is the child's norm. This cannot be represented in figures.

Propositions. — I. No given proficiency in Latin, Algebra, etc., necessary for life.

II. School must prepare for life. Therefore the consciousness of power should be the outcome. Ignoring the principle of ratio evolves consciousness of defeat.

III. *Marking System.*

a. The mark (necessarily based on attainment) supplies a false standard for self-estimate.

NOTE. — Only standard of comparison for a pupil is with himself, otherwise consciousness of possibility is imperfectly evoked.

b. Averaging places emphasis at wrong place, *viz.* on an average rather than on the individual study. This dulls consciousness of power. Marks are valuable to teacher as a matter of record and to supply data for her work. They are not to be given to pupils.

SELF-ACTIVITY, THE ADJECTIVE "FREE"

The Ideal. — Action to arise from inner impulse, not from external control.

NOTE. — Self-Activity the complement to Self-Revelation. Why make the child conscious of power if the power is not to be exercised?

Proposition.—Froebel protests against interference with the development of the child's possibilities.

Outcome of education to be reliance on self.

The child has two natures (*a*) the Divine Essence, (*b*) the Intrusion.

The Essence must be free. The Intrusion demands mandatory treatment, but under conditions as below.

Freedom to be considered from two standpoints (*a*) Moral Training, (*b*) Intellectual Training.

MORAL TRAINING

Basal Proposition.—For Moral Development, man must be free to do wrong.

Statement of Argument.—The faculties grow by exercise.

I. Exercise implies resistance.

NOTE.—To the extent that Discipline interferes with choice, it defeats Moral Development.

Law.—No command binding that cannot be accepted intelligently.

This is the ideal as regards education, not as regards control.

The opposite view may control. It cannot train. Question as to outcome, Self-control or External control?

Self-control implies coöperation. The antithesis of coöperation is despotism. But the boy is to live in a community, not in a despotism. The rebound from despotism is anarchy.

Sociological Inquiry to determine present outcome as respects Moral Training. That outcome is that the individual does right only when there is external control.

Specific Considerations.—Petty dishonesties. Party control. Millinery crusade. Cruelty in preparing food.

Immorality on the stage. Slowness of reforms. Sordid reasons for religion.

All the above is the legitimate outcome of a school training that looks to external control as the outcome.

Statement.—Purpose of Education. A Faithful Life. Faithful to Divine Possibility.

NOTE. — Possibility implies variety of attainment. Moral Possibility varies as much as possibility in arithmetic.

Practical considerations bearing on classroom.

I. To exert power, child must be conscious of power. Therefore there must be opportunity to reveal self.

Two forms of command.

a. Do this, regardless of your views.

b. Do this, and observe to what knowledge it leads you.

Command must evoke internal compliance.

Objection. — Child not to act unless he approves?

Answer. — Actually and at present, no. Ideally and ultimately, yes.

a. Command must be such as could be justified could the child comprehend.

b. If all commands are of this character, pupil will come to trust when he cannot understand.

Question as to outcome, allegiance or discipline?

Question as to state of pupils, disciple or slave?

II. Repression of child obscures motive.

Teacher must know motive to train moral activity. Hindered activity or forced activity makes this impossible.

Teacher often removes symptom, but not disease.

The other side of the child, the instruction or training.

This requires mandatory repressive treatment. But the source of the training must be known. This cannot be unless the child be free to reveal it. Apparent paradox.

III. We occasion crime by restriction.

Law may develop self-determination or crime.

Illustrations. Murders in France. Capital punishment in England. Yard disorder, black list, public apology.

Teacher seeks immediate results at expense of ultimate results.

Necessity calls forth freedom or slavery. (Same idea.)

Recalls the two kinds of commands.

IV. *Three Considerations. Precept, Example, Habit.*

They are necessary, but not final.

A. Precept. Fiat does not cause things to be in the child's mind except in the early development of the Moral Sentiment. Later development involves volition. Individual must recognize the binding force of precept before it becomes mandatory. Then it is only mandatory on the spirit.

Teacher mistakes her own accepted beliefs for axioms. A self-evident truth does not need to be taught prescriptively.

B. Example. — Imitation of a model life is dead. We must know its motives. We can prescribe an outward form, but not a motive. An ideal cannot be imposed on the spirit. The self-active spirit must recognize the principle that underlies the model.

In school the pupil must see that the teacher is herself subject to the laws she imposes. This is the source of personal influence.

Example is efficient so far as pupil's spiritual idea corresponds to teacher's.

C. Habit. — Valuable, but not highest conception.

Animal a bundle of habits. Man adds volition.

The origin of the habit (the way it came to be) is important.

Habit is reflex. Action must be volitional before it is reflex.

Conclusion.—The Divine Essence to be nursed.

FROEBEL IN THE UPPER GRADES

INTELLECTUAL TRAINING

Outcome and method same as in moral training, viz. Self-activity as opposed to enforced activity.

Compulsion works same malign results in both spheres of Education.

Postulates. — Non-interference. Opportunity for resistance.

Basal Proposition.—Boy to find his place in life. If he never finds it in school, he will not find it in life. Such education is failure.

Hence arises the idea of *Individuality*.

Individuality fundamental in a Froebelian view of education. Disregard of this principle fills the world with misfits.

APPLICATION TO SCHOOL ORGANIZATION

The *Graded System and Uniform Course of Study* may be hindrances to self-activity. When this is the case, they are to that extent malign. They must be subordinate to the central idea of individuality in teaching.

Uniformity not a regnant idea in moral reforms, in hospitals, in training of animals: indeed, nowhere but in school.

School training must look to individuality. (*a*) in teacher, (*b*) in pupil.

a. Teacher. — Superintendent must learn that the Froebelian principle of Freedom as applied to teacher and pupil is identical. Same malign results follow ignoring it in both cases.

b. Pupil. — 1. Work of school must be adjusted to child's possibility. Grade is secondary.

2. Promotions are to be made on the same basis. The child's individual norm in a given subject is the standard.

NOTE. — Observance of this principle reduces the teacher's burden because she demands of the child, and therefore of herself, possibilities.

NOTE. — Graded system thereby not destroyed, but vivified.

Proposition. — Each child is the incarnation of a divine purpose which the school must actualize.

Four sample considerations that may hinder self-activity.

I. Uniform examination.

NOTE. — Examination legitimate and necessary to inform teacher and pupil. As a basis of rating or promotion it extinguishes individuality, self-activity, consciousness of power.

II. Marking System.

The comparison of pupils implied depresses those who are marked down, dulls consciousness of power, and therefore discourages self-activity.

NOTE. — Teacher can make pupil want to do what she wishes him to do, only through self-activity.

NOTE. — Purpose of marks not to promote, or inform teacher or pupil, but merely to record for teacher's benefit alone.

Proposition. — We do not desire to do what we feel we cannot do well.

III. Rewards of Merit.

To be given for effort. If given for attainment, they discourage self-activity by diminishing consciousness of power.

IV. Prizes. — Depress most pupils.

SELF-ACTIVITY CONSIDERED FROM TEACHER'S SIDE

If a child is not free, teacher does not know him. Therefore she cannot reach the sources of self-activity.

Conclusion. — Education resides in what we bring about by self-activity of pupil, not in what we communicate or compel.

SPECIAL APPLICATION. INDEPENDENT ACTION

We do too much for our pupils. Result: Lack of power of independent action.

Arithmetic as an illustration. Two weaknesses.

1. Pupils unwilling to try long and patiently.
2. Unwilling or unable to verify results.

This is no preparation for work of life. Such training develops incapacity. Pupil is enfeebled when we do for him what he can do for himself.

Special method. — Pupil to repeat his work until it is correct.

Objection. — This takes time.

Answer. — *a.* Time wasted in unnecessary explanation is saved.

b. A smaller number of examples afford a better practice.

c. Important consideration is the outcome, viz. habits of accuracy, persistence, and concentration. Slatternly habits of mind the outcome of present methods.

Spelling. Special method. — Pupil to correct his own work before and after handing it in. The ultimate outcome to be absolute accuracy before handing it in.

Language. Special method. — Same as in spelling except that regard is here paid to the advancement of child, on the principle that each successive acquisition in Language and Grammar is to be made automatic.

PATH OF LEAST RESISTANCE

FOLLOWING VS. PRESCRIPTION

Data to be drawn from phenomena as exhibited by large numbers of children. This is the scientific method. The opposite method is a compound of empiricism and egotism.

Proposition.—When classes generally and under various teachers resist the teaching of a subject (*i.e.* learn with difficulty) the inference is that the subject or method is inappropriate to the child at the age.

Illustration 1. *Number* in 1st and 2d grades.

a. Taught with difficulty in such grades.

b. Taught with ease in 3d grade.

c. If beginning is postponed to third grade, results better in 4th grade than when subject was begun in 1st grade.

(*a*) Because subjects taught are along lines of congeniality, favoring mental (self) activity.

(*b*) Because the outcome is a habit of mental activity which favors self-activity when the time for teaching number arrives.

Illustration 2. *Language.*—Little children learn language easily. Facility diminishes with age.

NOTE.—Activity of children not volitional. They absorb rather than learn.

Corollary.—By the opposite course not only is a habit of mental activity not acquired, but a habit of mental apathy is acquired.

Illustration 3. *Music.*—Children will sing and draw. Path of least resistance indicated. Therefore a habit of mental activity is the outcome.

NOTE.—Music is robbed of its virtue if singing becomes perfunctory.

Illustration 4. *Vertical writing*. — Resistance to Spencerian angle long indicated its incorrectness.

Corollary. — Teacher's hand to be on the pulse of the class.

INTENSIVE ILLUSTRATIONS

A. Story telling. — If the stock of ideas is ample, expression in language will be ready. Path of least resistance indicates the stimulation of mind to enlargement of stock of ideas. One important method is story telling.

NOTE. — The child naturally "gathers material."

Basal proposition. — Story telling founded on the child's longing for the interpretation of his ideas and fancies.

NOTE. — Success in story telling as an art is a matter of interpretation. The child invests speechless things with life. Later he will demand to understand the past. Places have their meaning. The story teller must recognize the inner meaning of things, must be an interpreter, or he is dead to the child.

Here is a universal and therefore healthy demand. It points to an outcome of mental activity.

Stories should not generally be for purposes of written reproduction. Morals to stories are impertinent.

Corollary. — Story telling brings about most intimate relation of teacher and child. "Mind breathes mind."

Proposition. — Reading stories in later child life adds the conception of the book as a book.

Proposition. — An important outcome of story telling is the stimulation of the child to read. To bring this about the teacher must provide much material for silent reading, and also provide the opportunity to use it.

B. Beauty. — Love of the beautiful an evident fact of

childhood. To gratify it is not conceding a luxury, therefore is not optional.

Froebel's claim. — A work of art reveals the soul of the artist: therefore the beauty of nature reveals God. Beauty leads to the Deity, therefore to the highest truth.

Proposition. — The path of least resistance along the lines of duty is along the lines of beauty.

NOTE. — Decoration of a schoolroom is a necessity as an important means of moral training. Much use of color in regular work is desirable.

C. Nature study. — Nature study a long time coming. Yet its necessity was indicated long ago by the nature of the child.

Practice has not lined up with child nature. This study is the field for appalling violations of the law of least resistance. We have poured in facts. This is not the way a child comes to the knowledge of nature. The child is a ramblor, a discoverer. He belongs to the first period of scientific research, that of gathering of data.

Errors in conducting nature study relate to the kind, amount, and order of presentation of facts.

NOTE. — School cannot in any subject teach the child all that he is going to know.

Purposes of nature study.

a. To train perception and comparison. *b.* To interest child in world around him. *c.* To widen his knowledge of facts.

NOTE. — These purposes do not sustain uniform relations as regards importance in the various grades.

Three indications (not exclusive) as to the course of Nature Study:

a. Children love life.

b. Children love beauty.

c. Children observe in a surface way.

a. Life. Order indicated: 1. Animals. 2. Plants. 3. Inorganic substances.

NOTE. — Recall fact that children invest lifeless things with life.

b. *Beauty*. — Already considered.

c. *Surface observations*. — Children see details but not in an orderly way. A certain amount of order will be tolerated by the child. The time to stop is when serious resistance is encountered. This is not the period for intensive teaching.

Indications as to choice of objects.

a. *Law of apperception*. — This is evidently regnant in child life. Object must not imply too much of the unknown. Familiar animals as a rule better than unfamiliar.

b. *Season*. — Changes in nature associated with child's deepest joys.

c. *Scheme of objects to have coherence*. — Study not intensive but also not haphazard. The butterfly style of teaching is not the model.

Processes.

a. *Observation*. — 1. All senses to be involved. 2. Observation to be not on insignificant facts. 3. Observation not to go too much into detail. 4. Order of observation to be guided by law of apperception. 5. Observation should be guided by a definite aim.

b. *Description*. — Language and drawing. Language must, in the nature of things, be largely oral. Drawing to be from the object.

Correlated helps.

Literature (juvenile), songs, reading to pupils, story telling.

NOTE. — So-called nature readers for young children are often in violation of foregoing principles.

Moral outcome.

a. Sympathy. *b.* Reverence for life. *c.* A tendency to recognize the Deity in nature.

D. Spelling.—1. Criticism of spelling should be analytical. Investigation indicates that there are many causes of bad spelling, each of which calls for specific treatment. This means fewer exercises.

2. As by far the larger proportion of false percepts are derived through sound, the importance of a large amount of oral work is indicated. The relation between a false percept and a sound is probably individual and intimate.

3. The ultimate purpose of spelling is to write in a paragraph. Oral drill and column work are means only to that end.

4. The great preponderance of sound errors and the fact that these relate to the child's own vocabulary indicate the error of concentrating on unfamiliar words.

5. The introduction of new words is not for purpose of teaching spelling but to increase vocabulary. Such increase must be very slow.

6. Children should correct most of their own errors.

7. The moral phase is important. If the teacher considers as errors those mis-spellings which do not indicate lack of knowledge, as shown by his own power of self-correction, he is unjust.

E. Language.—Most difficult subject of the course because the child's environment outside the school neutralizes instruction given in school.

a. Proposed results of language study: 1. To teach to speak and write English. 2. To teach grammar. The latter except in a limited sense is not a means to the

former but an end in itself and a means to analytical study of language.

b. Actual results. 1. *Oral.* Pupils cannot form an English sentence. Accuracy and fluency both wanting. Answers of children in ordinary work, fragmentary, obscure, badly constructed. 2. *Written.* Work lacks freedom, accuracy in expression, and fertility of thought.

c. Reasons. 1. No clear purpose in teaching. 2. No rational adjustment of means to end. 3. No concentration on difficulties. 4. Excessive help.

d. Remedy. Study and be governed by conditions. Observe law of least resistance. Follow suggestions of *c.* In particular apply only so much of grammar to language as indicated by results of investigation, as follows:

Investigation shows that the errors in grammar are few, permitting concentration; that the order of treatment is ascertainable, and that the intensive study of grammar belongs to the eighth grade.

Errors indicated by the investigation as popular: 1. Excessive use of connectives. 2. Use of superfluous words. 3. Relation of subject and predicate. 4. Errors in imperfect tense and perfect participle. 5. Considerations relating to antecedent of pronoun. 6. Use of possessive nouns. 7. Misuse of prepositions.

F. Reading. Concentration on mechanical act of reading to the practical exclusion of interest in the story brings about mental apathy.

Mechanical methods, which bring about more or less apathy, demonstrate their own futility, for apathy is an important indication of resistance.

Silent reading in large quantities is indicated by the child's

avidity for it and the progress he makes if the educational scheme encourages it. We hinder the child's growth by insisting that the reading should be largely oral.

G. Arithmetic.—In addition to considerations in general, discussion of the law of least resistance.

a. Training to automatic accuracy indicated in earlier years. Harder to attain after 5th year. Failure to obey the indication leads to feebleness both in reasoning and manipulation of numbers in later years.

b. Oral work indicated by observation of conditions. Pencil used too soon and too much. Vast amount of practice necessary to secure command of arithmetical processes cannot be obtained through written work alone.

c. On the other hand, what is called mental work (demanding reasoning) is introduced in advance of child's capacity.

d. Crowding the child a violation of the law. A vast amount of easy work needed, *e.g.* in division of decimals. Be governed by the resistance offered by the class.

e. Subjects taken in advance of child's capacity. A kindred violation, *e.g.* long division in 3d year.

f. Premature development of reasoning power, *e.g.* explanation of carrying in subtraction. No help to child and he resists it. Many things must be done in advance of capacity for understanding reasons, *e.g.* learning to walk.

g. Grube heresy. The fundamental processes may be carried along simultaneously but not abreast. After a certain point the child resists the whole Grube method.

h. Use of concrete after data show it is not needed. Also failure to return to concrete when indications point to such return.

i. The spiral method indicated. Any subject in arithmetic

is resisted after a certain point, and further consideration must be postponed. But all topics may be taken in their rudiments quite early without resistance. But this does not justify a dilettante method indicated by some arithmetics, in which there is no law governing the treatment of any given topic.

COMMUNITY

Coöperation (Community) runs through kindergarten system, in games and work.

Basal proposition.—Brotherhood in family and school, always associated with fatherhood. The outcome should be that the one should suggest the other. The conception of brotherhood leads to that of fatherhood, therefore to religion. Therefore brotherhood in school life is the condition favoring the highest morality.

Proof drawn from (a) scriptural definitions of religion, (b) consensus of popular opinion. Both make brotherhood an essential condition to the conception of fatherhood.

Proposition.—Genius of the school is generally not fraternity but segregation.

Illustration. Schemes of administration based on rivalry. Rivalry is a counter principle to fraternity.

Caste in school has the same outcome as caste in society. Caste and solidarity are opposing words.

Proposition.—Social instinct is inborn in children but we stifle it. *Illustrations.* Clumsy treatment of prompting and tattling.

Objection.—We train for practical life in which the survival of the fittest is the controlling principle.

Answer.—(a) the present social conditions are a true reflex of this principle. But no one thinks they are to be

intensified. All social reforms tend to their amelioration along lines of solidarity.

(b) The child needs no intensification of the egotistic passions.

Proposition.—Responsibility rests on teacher. If she throws away motherhood, she throws away brotherhood.

The commands of teacher must be based on eternal necessity. Then despotism is banished. Neither fatherhood nor brotherhood can exist with despotism. The choice is between allegiance and discipline. The commands of Jesus are based on eternal necessity and are therefore the best illustration of Froebel's conception of reciprocal obligation that he calls "The third something." First something is the child, second the teacher, third the relation based on unavoidable necessity and not on caprice.

Postulate.—Morality is social.

Some specific illustrations of community.

a. Chorus singing, especially part singing, trains for community in the future as well as the present, because music is a bond among adults. It has a moral tendency also, in that it trains for hours of leisure, which are the hours of temptation. It should be used as a serious exercise and not as a means of killing time.

b. Reading aloud.

c. Games, matches, history games, etc.

d. Debates may in a simple way be introduced very early.

e. Parliamentary practice.

f. Democratic organization of school.

aa. Class divided into two clubs for match purposes. (Emulation is distinct from rivalry.)

bb. The privilege of electing by class in place of appointment wherever this can be done.

cc. An organization or lodge within the school to educate the sense of honor. Such an organization should discipline its own members. It should have its badges and other insignia. It will attract to itself many otherwise hard to reach. (History of Order of the White Ribbon.)

g. Class tone, an antidote to dangers from impurity of thought.

h. Solidarity. Thanksgiving gifts to the poor. Altruism essential to brotherhood.

i. Patriotism.

EPOCHS

General Statement. *a.* Child at different stages of growth a different being. *b.* All the later epochs are potentially present in the earlier. *c.* All the earlier epochs persist in the later.

Froebel's epochs. Infancy, Childhood, Boyhood, Youth.

Scholium.—Life is unfolding, not repetition.

A. Infancy.—Predominant characteristic, absence of self-activity. Importance of this epoch to the teacher lies in the fact that it projects itself into later life. (See *c* above.) When purpose is absent the characteristics of infancy are present. Purposeless activity indicates the supervening of infancy. Illustration. Child squirming, shaking itself, dancing without apparent intention, laughing aloud with no apparent provocation.

In later life, the Bohemian instinct indicates unwillingness to be controlled by purpose. The wearied man of business returns to the old homestead, and casts aside purpose and allows his actions to be controlled by others.

Lesson. Infancy may supervene at any time. Teacher must diagnose the condition wisely. *a.* Volitional activity drains the nervous force. The rhythm of the day may therefore make dominant the characteristics of infancy. *b.* If this does not take place within a day, there is a rhythm covering a longer period, a month, a year. *c.* The moral sentiment is, in its earlier development, without purpose (*e.g.* a mere matter of personal attachment). It may persist in such a form into childhood or boyhood, or it may revert to such a form.

B. Childhood. — Characteristics. Presence of self-activity, externalization of the non-ego.

Child is a sponge. Lesson. Environment must be pure. Language must be exact. (Note. This period projects into later period, carrying with it its characteristics.)

Froebel says the child unifies everything with himself, *e.g.* evil becomes a part of himself. He does not relate things to each other but to himself.

This disposition is deplored by impatient teachers and parents. Such an attitude is wrong. The unifying power is easily lost.

C. Boyhood and youth.

Froebel's important doctrines. — An epoch cannot be omitted. Child becomes a man not by reaching a certain age but by passing through certain stages.

The individual must be what the epoch calls for. The next epoch is not to be forced. Illustration. *a.* Embryology of eggs. *b.* Self-consciousness extinguishes childhood. *c.* Forcing youth on childhood by overdressing. *d.* See law of least resistance. Practice in class room must be governed by characteristics of epoch, else epoch is extinguished.

To recognize a later epoch as germinal in an earlier is necessary, but to force its development is vicious, *e.g.* a little child may be told to "be a man," but only in a limited sense. The lady may be respected in a little girl, but she is nevertheless not a lady but a child.

Special Illustration. Religion belongs to age of adolescence. It is potential in the child, but its adolescent form cannot be forced on childhood without sad results.

INDEX

- Accuracy, absence of, in ordinary school work, 41; manual training, an incentive to, 60.
- Achievement, "consciousness of power" as an aid to, 19, 20, 196; development of power of, 256-258.
- Activity, self, the law of, 1-10, 23-25, 42, 61, 202, 253-255.
- Age, the kindergarten, 11, 12, 15, 17; the playing age, 100-101; proper age for choosing future occupation, 78-79; for study of arithmetic, 21-22; for work in language, 202.
- Alertness, 257.
- Ambition, encouragement of, 99, 107; lack of, 99, 107.
- Apathy, causes of, 8, 9, 41, 91; methods of dealing with, 43, 44, 45, 74, 107, 128; signs of, 2.
- Appreciation, of beauty, 92, 94, 96, 134; of literature, 133, 167, 168; of music, 131, 132.
- Arithmetic, 6, 8, 21, 34, 35, 49, 50, 110, 114, 118, 121, 126, 127, 129, 136-140.
- Attention, habit of, 103.
- Basic Principles, 252-260.
- Beauty, appreciation of, 92, 94, 96, 134.
- Child, the; attitude toward work, 41, 46, 47, 51, 52; Froebel's epochs, 278-280; instinct of play in, 98, 102, 103, 107, 110; natural interests of, 92, 93, 94, 96.
- Class Distinctions, the stumbling-block to progress, 56, 76, 80.
- Community Spirit; 276, 277, kindergarten, an aid to, 14; play, an incentive to, 104, 105.
- Competition, benefits of, 44, 103.
- Composition, 202, 210, 212-213; difficultly experienced by child in, 119-121.
- Concentration; necessity for, in teaching, 208, 211, 221, 224, 225, 244; value of, to child, 13, 14, 126.
- Conservatism, 10.
- Control, self, 103, 104, 105.
- Course of study, enrichment of, 123, 128, 129; flexibility in, 77; mistakes in present, 23, 35, 45, 46, 157, 203, 259.
- Crime, cost of, 15, 16.
- Criticisms of present school system, 111-120.
- Culture Subjects, 73, 259.
- Development, law of child, 26, 27, 28, 29, 30; mental and moral, of children, 17, 18.
- Discipline, 4.
- Drawing, 133-134.
- "Ear-mindedness," in spelling, 181-183.
- Education, ends of, 26, 64, 65, 67; inducements to, 44, 45, 47, 51; industrial, 49, 51, 55, 62, 64, 65, 68, 69, 74, 75, 88, 259, 260; important fact in, 6; modern practice in, 2, 20, 52, 53; "new education," 1, 2-4, 255; outcome of, 7, 17; "practical," 11, 89, 90; standard for, 30, 46, 47; value of, 257; vocational, 48-49; weakest element in, 1; why educate? 136-137, 144, 260.
- Effort; importance of, 95-96; incentives to, 43-44.
- Encouragement, 19, 195.
- Enthusiasm, method of arousing, 95-96.
- Errors, in child's use of language, 214-240; in spelling, 175-194.

- "Essentials," the; as taught yesterday and to-day, 112-123, 128, 130, 136; factors that determine the essentiality of subjects, 142.
- Examinations, 246, 255, 256.
- "Facts," their place in education, 143, 150, 254.
- Fertility of thought, 197-199.
- Froebel, 19, 21, 27, 28, 30, 31, 33, 38, 92-93, 100.
- Geography, 8, 50, 142-168.
- "Gracious Overflow," Law of the, 128, 236.
- Grammar, 7, 204, 205, 206, 212, 222, 239, 240, 241; critical study of, 207; formal study of, 241, 242.
- Growth, law of, 2, 4, 25.
- Gumption, 39-53.
- Habits, bad, 15; basis of, 254-255; in grammar, 238; the reading, 165-166.
- Happiness, the basis of work, 106; music, an aid to, 130.
- History, 245-251; topical method of studying, 247-248.
- Imagination, 153, 157.
- Imitation, 48.
- Incentive, to effort, 43-44.
- Independence, 268; necessity for, 2, 3, 4, 6, 7; play, an incentive to, 102, 103; teacher's failure to recognize, 199, 210; value of, in action, 252, 253.
- Individuality, 102.
- Interest, arousing by play, 99, 107, 108, 109; by study of geography, 148, 149, 158, 159; awakening of, by manual training, 58, 59; by nature study, 92, 93, 95, 96; child's natural, 92, 93, 94, 96; loss of, 202, 203.
- Investigation, the child's spirit of, 92, 93; geography, a spur to, 145, 148, 149, 150, 153, 155, 156; in the study of history, 247, 248, 249.
- Justice, 195-196.
- Kindergarten, 30-32, 36-38; apparatus, 18-19; cost of, 15, 16; effect on child, 13-14, 17; materials used in grades, 31-32.
- Language, 22, 197-244; accuracy of expression, 199; freedom in, 197-199; fertility of, 199; oral work in, 208.
- Literature, 8, 133, 134, 167, 168.
- Manual training, 54-63; benefits of, 56, 57, 58; history of, 54, 55; results of, 59, 60, 61.
- Maps, 150, 151.
- Marking system, faults in the, 19, 20, 45, 195, 196, 255.
- Material, child's collection of, 92-93; kindergarten, 18, 19, 31, 32.
- Memory, relative importance of, 153, 159, 247.
- Moral development of child, 14, 17, 25, 195; play as a moral force, 105.
- Motor training, 104.
- Music, 126, 130-133.
- Nature study, 22, 52, 89-97.
- Observation, 14, 148, 149, 150-152, 154, 155, 156, 235.
- Overflow, Law of the Gracious, 128, 236.
- Penmanship, 119, 121.
- Perception, 153, 154; failure to develop, 155.
- Personality, 9, 34-35; fundamental principle in education, 141.
- Physical training, manual training, an aid to, 60, 61.
- Pictures, collections of, for school work, 158-159.
- Play, 98-110.
- Pleasure, educational training for, 131, 132, 133, 134, 135.
- Power, 127, 236, 256, 257, 258; consciousness of, 19, 20, 196; development of, 1, 6, 7; power to reason, 146-148.

- Preparation, for life work, 78-80, 82, 86.
Principles, Basic, 252-260.
Reading, 14, 24, 33-35, 100, 120-121, 161-168.
Revelation, self, 20, 21, 22, 33, 141.
Rewards, 43-44, 45.
Self-control, 103, 104, 105.
Shop work, 60.
Social instinct, the, 100, 104, 108, 276, 277.
Spelling, 113, 115, 120, 169-196, 235.
Spontaneity, 202, 203.
Stupidity, 161, 255, 266.
Teacher, the, attitude toward child, 2, 3, 6, 24, 25, 52, 254; grammar school, 5, 31; high school, 5, 29; kindergarten, 31, 36-38.
Trade teaching, 84, 86, 87.
Vocabulary, increase in, 167, 172; use of child's ordinary vocabulary in study of spelling, 186, 193, 194, 235, 236.
Vocational selection, 78, 79.
Vocational training, 48, 49, 50, 51, 52.
Wages, as affected by vocational training, 86, 87, 88.

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